CALIFORNIA AND WESTERN MEDICINE

OFFICIAL JOURNAL OF THE CALIFORNIA MEDICAL ASSOCIATION

VOL. 49 OCTOBER, 1938 NO. 4

California and Western Medicine

Owned and Published by the
CALIFORNIA MEDICAL ASSOCIATION
Four Fifty Sutter, Room 2004, San Francisco, Phone DOuglas 0062

Address editorial, business and advertising communications to Dr. George H. Kress as per address above.

EDITOR . . . . . GEORGE H. KRESS

Advertisements.—The Journal is published on the seventh of the month. Advertising copy must be received not later than the fifteenth of the month preceding issue. Advertising rates will be sent on request.

BUSINESS MANAGER . . . . . GEORGE H. KRESS

Advertising Representative for Northern California
L. J. FLYNN, 544 Market Street, San Francisco (DOuglas 0577)

Copyright, 1938, by the California Medical Association

Subscription prices, $5 ($6 for foreign countries); single copies, 50 cents.

Volumes begin with the first of January and the first of July. Subscriptions may commence at any time.

Change of Address.—Request for change of address should give both the old and the new address. No change in any address on the mailing list will be made until such change is requested by county secretaries or by the member concerned.

Responsibility for Statements and Conclusions in Original Articles.—Authors are responsible for all statements, conclusions and methods of presenting their subjects. These may or may not be in harmony with the views of the editorial staff. It is aimed to permit authors to have as wide latitude as the general policy of the Journal and the demands on its space may permit. The right to reduce or reject any article is always reserved.

Contributions—Exclusive Publication.—Articles are accepted for publication on condition that they are contributed solely to this Journal. New copy must be sent to the editorial office not later than the fifteenth day of the month preceding the date of publication.

Contributions—Length of Articles: Extra Costs.—Original articles should not exceed three and one-half pages in length. Authors who wish articles of greater length printed must pay extra costs involved. Illustrations in excess of amount allowed by the Council are also extra.

Leaflet Regarding Rules of Publication.—CALIFORNIA AND WESTERN MEDICINE has prepared a leaflet explaining its rules regarding publication. This leaflet gives suggestions on the preparation of manuscripts and of illustrations. It is suggested that contributors to this Journal write to its office requesting a copy of this leaflet.

DEPARTMENT INDEX

(Itemized Index of Articles is printed on Front Cover)

	PAGE
Editorials	249
Editorial Comment	254
Original Articles	256
Lure of Medical History	308
Clinical Notes and Case Reports	310
Bedside Medicine	314
California Medical Association	318
C. M. A. Department of Public Relations	324
Woman's Auxiliary to C. M. A.	330
News	332
Letters	340
Medical Jurisprudence	343
Special Articles	343
Twenty-five Years Ago; State Examining Board	352
Index to Advertisements	Adv. p. 8

EDITORIALS†

IMPORTANT SPECIAL SESSION OF THE A. M. A. HOUSE OF DELEGATES

An Historic Special Session of the American Medical Association House of Delegates.—For the third time in many years, the House of Delegates of the American Medical Association was called into special session at Chicago, on Friday and Saturday, the 16th and 17th of September, and elsewhere in this issue of the Official Journal‡ appear a chronicle and comments on the proceedings of the two all-day meetings, at which policies of paramount importance to future medical practice were discussed. Members of the California Medical Association are therefore urged to read these articles because—believe it or not—the principles there considered and acted upon are such that, if they or their modifications are placed in operation, it is possible the future professional and personal welfare of every physician now in active practice may be involved.

So rapid are some of the present tendencies that it is difficult—even for those members of the profession who in recent years have been making special efforts to keep themselves mentally alert and in touch with passing events—to know the place and time, where and when political changes will be initiated, and on so firm a foundation that the nature of medical practice, as it now exists and has long been understood and interpreted, will not only be imperiled, but be made to change; and that, too, no matter how unanimous physicians may be in resisting the innovations. What is hinted at, of course, is the possibility of the United States establishing a plan of health insurance under governmental influence, through plans closely akin or modeled after the German Krankenkassen or British panel systems.

* * *

Impending Dangers to Medical Practice May Be Prevented.—Fortunately, if the members of the medical profession in the United States will realize—before it is too late—the impending dangers, it is possible that the infliction of these foreign methods of medical practice may be averted. That this would be eminently desirable is readily

† Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comment column which follows.

‡ See page 318.

seen when it is perceived how unsuited are such methods, even in their respective lands, to the best development of scientific medicine and its practices. In our own country, with its existing political organization, they are still more unadaptable, and would without doubt lead to deplorable results by bringing about a medical practice, surcharged with dull regimentation, mediocrity and elements yet worse. Such deleterious factors must not be permitted to debauch a profession whose altruistic and forward-visioned services have been mainly responsible for making it possible for the United States of America to give to its people rates of morbidity and mortality and life expectancies superior to the best that can be shown by any other civilized country. How natural, then, that physicians, knowing these simple and indisputable facts, should rebel at plans, under political or other sponsorship, that would do away with such unalloyed blessings! In a consideration of the recent session of the American Medical Association House of Delegates, these facts must be kept in mind.

* * *

American Medical Association Is a Federacy and Its House of Delegates Is a Representative Body.—As is, of course, widely known, the American Medical Association is the mouthpiece of organized, scientific medicine throughout the United States. It is a federacy of constituent state associations, in turn made up of component county medical societies, the basic law permitting only one constituent association for each state, and only one society or unit in each county. The county societies, in proportion to their rolls of local members, elect a certain number of representatives to make up the House of Delegates of the State Association, to which is delegated the responsibility of electing—again on the numerical basis of membership—a certain quota of representatives to become members of the House of Delegates of the American Medical Association. In this federacy, the 6,000 members of the California Medical Association are represented by seven delegates in the American Medical Association House of Delegates. At the recent special session in Chicago, the full California delegation was in attendance. The House of Delegates of the American Medical Association, therefore, there assembled was about as representative a body as could be formed. True, its members reflect the viewpoints of the states from which they come, and the fact that principles enunciated and actions taken by the American Medical Association House of Delegates do not always receive cordial and unanimous consent from all its members means nothing else than that medical practice problems may be and are quite different in the various sections of the United States. This fact, unfortunately, is not at all times kept in mind by lay theorists and propagandists who, carried away in ecstasy by paper schemes of their own groups and cults, in an unctious feeling of self-sufficiency, would impress their compulsory health systems not only upon the people at large, but upon the medical profession of these United States.

The Medical Profession, Not Theorists and Propagandists, Must Lead.—We know that we, ourselves, as medical men and women, find it difficult occasionally to solve some of the social welfare and economic problems so often intimately associated as causative factors in sickness due to bodily disease; but at least—and in spite of the fact that the educational standards of nonsectarian medicine more than measure up to the best among any of the professions, and that the first-hand knowledge and experience of physicians should give them special license to speak—we, be it said to our credit, are not egotistical enough to flaunt a universal plan before the public as a scheme that would tremendously lessen, if not actually do away with, human illness and suffering.

* * *

Obligation of Every Physician.—The thought contributory to the above comments is that every member of the profession of scientific medicine, in these present days, owes it to himself, and to the people to whom he has dedicated his life service, to keep in touch with current public welfare, political and medical trends, and so, to take an active interest, that he will promote meetings in his county medical society where these important matters may be discussed and clarified. There and then, the constituted officers of his medical organizations may be made acquainted with his own views and his unqualified willingness to give the fullest coöperation in upholding the standards of scientific medicine, to the end that adequate medical service may be given to all the people, no matter to what income groups they may belong.

To that fundamental principle the physicians of today are as firmly devoted as in the years long passed, and during which their public health and other labors have brought to our fellow countrymen so many blessings in the prevention and cure of disease.

PROPOSED "HUMANE" DOG-POUND LAW (INITIATIVE NO. 2)

Proposed Initiative a Menace to the Public Health.—California's public health interests will be directly and seriously endangered if Initiative Proposition Number 2 (Humane Dog Pound Initiative) receives the favorable vote of the State's electorate. The deplorable effects will extend farther than California, because this guinea-pig experiment by the antivivisectionist group, if it is carried through to successful conclusion in California, will no doubt be imitated in other states of the Union.

* * *

Title of the Initiative Is Misleading.—As has been stated in previous issues of CALIFORNIA AND WESTERN MEDICINE, the euphonious phraseology of the proposed law, and the high-sounding appeals for its passage on the sentimental plea, "Protect Man's Best Friend, the Dog!" etc. (backed, as the efforts are, by a goodly number of newspapers, movie stars and other factors in publicity) have

already led many voters to acquire an improper understanding of the purport and scope of the proposed act.

* * *

Every California Physician Should Be Interested.—It is of the very first importance, then, that every physician in California should take an active interest in this movement and make a personal effort to do his part in bringing about the defeat of this absurdly misnamed "Humane Dog Pound" Initiative.

Animal experimentation, humanely carried on in the laboratories of the accredited medical schools of California and designed to add additional knowledge, whereby disease in both human beings and the lower animals may be prevented (or, if it is present, be overcome), must not be stifled and done away with because of the erroneous thinking and emotional outbursts of either well-meaning and misled citizens, or of highly prejudiced disciples of the antivivisectionist group.

The special danger in Initiative No. 2 has been carefully concealed in phraseology seemingly dealing only with the kindly care of dogs. Appeals without number have been made to dog lovers to use their influence for the passage of this law, supposedly to prevent their dog pets from being stolen and carried away to medical laboratories, there to be cruelly treated in dissection and similar experiments.

Of course, to physicians who have received their initial training in medical laboratories, and whose lives are dedicated to the relief of human suffering, the fallacy and viciousness of such statements is at once apparent. So also to veterinary surgeons, who practice their profession in efforts to prevent disease and suffering among these lower animals, the propaganda of antivivisectionists is likewise abhorrent.

* * *

Articles by Professor A. C. Ivy and Chester Rowell, Esq.—CALIFORNIA AND WESTERN MEDICINE's policy is not to give space in its original articles department of papers previously printed, but in this number an exception is made, in order to more forcibly bring to the attention of the 6,000 members of the California Medical Association the importance of the issues involved in the Humane Dog Pound Initiative. We are, therefore, reprinting from the December, 1934, issue of our Official Journal a symposium of articles by A. C. Ivy, Ph. D., M. D., professor of physiology in Northwestern University, and by Chester Rowell, LL.D., of San Francisco, well-known editor and press columnist—and a nephew of a much-beloved and prominent California physician of twenty-five years and more ago, the late Chester Rowell of Fresno—two of but many distinguished scholars and publicists who have come out unreservedly against the so-called "Humane Dog Pound" measure.

The articles which appear on pages 256-265, therefore, are given such prominent position owing to their pertinent interest, and also their worthiness for rereading if formerly perused; and because of their applicability in a consideration of the basic issues in Initiative No. 2. Be sure to read them. You will then be better prepared to explain the viciousness of Humane Dog Pound Initiative—Proposition No. 2.

SOLICITATION OF PATIENTS FOR MEDICAL SERVICE PLANS CONTROLLED BY COUNTY MEDICAL SOCIETIES

Resolution Presented by the California Delegation.—In Chicago, on Friday, September 16, Dr. Charles A. Dukes of Oakland submitted to the American Medical Association House of Delegates, in special session convened, a resolution which is reprinted in this issue on page 320.

The preamble of the resolution called attention to the need of adequate medical care for all citizens, no matter to what income groups they may belong, and suggested that such adequate medical care could be made obtainable by certain low-income groups throughout the United States if it were possible for the component county medical societies in the forty-eight constituent state medical associations of the American Medical Association to offer medical service under plans adapted to their respective communities, and approved by their respective state associations, and by which they could solicit business, and in impersonal manner, without being accused of violation of the American Medical Association "Principles of Ethics."

* * *

Background of the Resolution.—The thought back of the resolution is this: Physicians, no less than their lay fellows, live in a practical work-a-day world. American business is conducted on certain principles, and, among such, legitimate solicitation for patronage has a place. Medical service of higher quality and greater scope for certain stipulated, low-income groups can be given by county medical nonprofit units with greater ease and efficiency than by commercial groups or corporations, organized for profit. County medical societies and their interlocking groups—as in the Alameda County plan, for example—are handicapped when they would go before a special industry to offer health insurance coverage on a prepayment basis, because the cry of solicitation and violation of ethics is at once raised. To overcome this, the resolution (printed on page 320) was drafted, and request was made therein that Section 4 of Chapter 3 of the Principles of Ethics of the American Medical Association (which Principles are not by-laws, but only rules of conduct adopted by resolution of the American Medical Association House of Delegates) be so *interpreted,* that impersonal solicitation for the above purpose be admissible, and be not construed as unprofessional.

* * *

Reaction of the Press.—The newspaper excerpts given in this issue on page 321, indicate the reaction of the lay press. Many members of the

House of Delegates expressed to members of the California delegation their sympathy for the resolution and their belief in its value and need. However, on a technical ruling that the resolution was not admissable under the call of the special session, it was agreed that its passage should not be pushed to vote.

The careful attention of members of the California Medical Association is called thereto because in its present or modified form it will, in all probability, come up for approval or rejection at the 1939 annual session of the California Medical Association. In the meantime, the purport and scope of the resolution and the thought behind it are commended to the consideration of the component county societies and their many members.

POSTGRADUATE ACTIVITIES OF THE CALIFORNIA MEDICAL ASSOCIATION

Scientific Medicine Is Constantly Advancing. Scientific medicine pauses and waits for no one. Its disciples and devotees are unceasing in their earnest quests for newer knowledge. They are intent that man must be victorious over disease where and when it may show itself. The advances made in the last half-century are little short of marvelous. The amazing progress boasted of in these latter few decades is largely responsible for the great increase in life expectancy in countries of the civilized world. Many are the discoveries given to the people of all lands by the disciples of Aesculapius, made gladly, generously, and without request for monetary or other reward. In no other group or guild does this altruistic tradition exist. It is a something, a token, of which every medical man and woman should be proud.

* * *

Physicians Must Be Alert to Changing Knowledge.—We must not, however, in our individual selves, be content to bask in the glory of fellows whose researches have made significant additions to medical knowledge of worth. Each of us must strive to keep in touch with recent advances in medical science, so that every patient may know that the professional services rendered for him have measured up to the highest and best standards.

* * *

Private Practice Is a Hard Taskmaster.—The intimate personal relationship between patient and physician in general practice has its joys and rewards, but also its disadvantages. It is often difficult, for instance, for a physician to leave his practice for a needed vacation, or for a course of study in newer methods, especially when the sought-after work necessitates an absence from home. Yet, every physician owes it to himself and to his patients to keep abreast of the knowledge which recent methods in practice may have demonstrated should be used; and it is just here that cooperation with the Committee on Postgraduate Activities of the California Medical Association may be of real value.

Postgraduate Supplement to This Issue.—Our State Association is, therefore, prepared to bring to every county unit, or group of county units or district that requests it, colleagues who are willing to give clinical and other postgraduate or refresher courses. The Postgraduate Supplement to this October issue of CALIFORNIA AND WESTERN MEDICINE presents the plans of the Standing Committee on Postgraduate Activities. Members are requested to scan carefully and to discuss the plans at their county society meetings. The Supplement aims to indicate the means whereby local groups, through correspondence with the State Association headquarters office in San Francisco, may arrange for postgraduate conferences.

The Committee hopes that the year 1938-1939 will record a generous response by members from all sections of California. Suggestions are requested: if, for example, the Supplement is lacking in any needed features, members are to feel free to write the Committee, and tender their recommendations. It should be kept in mind, however, that when clinic or other conferences have been arranged, the least that can be done, as an expression of appreciation for guest clinicians and other speakers who may have traveled considerable distances, perhaps at real inconvenience to themselves, is to insure a good attendance. It is important on that account that all members of local committees in charge of postgraduate conferences should meet their responsibilities and be active aids in making their conferences a success. Honorary or nonactive members are not needed on a local postgraduate committee.

As before stated, a plea is made for careful scanning of the Supplement and, after arrangements have been made for a Postgraduate Conference, for active and whole-hearted coöperation in carrying it through to successful conclusion.

NOVEMBER STATE ELECTION: ITS PUBLIC HEALTH IMPORTANCE

November State Election of Great Importance.—The significance of the state election to be held Tuesday, November 8, has been stressed in previous issues of this magazine.* It is not only important that every physician should vote, but that he should utilize every occasion and legitimate means to acquaint his friends and patients with his views and preferences, especially in so far as public health matters are concerned.

* * *

Proposed Humane Dog Pound Initiative (No. 2) Must Be Combated.—Efforts should be unceasingly made to combat the vicious proposed Humane Dog Pound Law, a misnomer for an endeavor that would practically do away with humane animal experimentation designed to bring to light knowledge whereby disease may be prevented or overcome. This subject is referred to elsewhere in this number of the Official Journal.†

* See CALIFORNIA AND WESTERN MEDICINE, September, 1938, on page 180.

† See pages 254; 256-265; 324; and 343-344.

Public Health Views of Legislative Candidates.—A component county medical society and its members are negligent in both their civic and medical responsibilities if they fail to learn whether their State Senator and State Assemblymen candidates who aspire to represent their particular district have sound views on public health problems. This knowledge may be obtained through individual members or through committees. Above all, however, this knowledge should be obtained and exactly. An additional and important service will be rendered if a confidential letter is sent to the State Association Secretary indicating what has been learned concerning candidates of the two major political parties. Certainly, no aspirants to legislative office should be supported by physicians when such candidates are not in harmony with public health advancement, as physicians, with their special knowledge, understand such needs.

* * *

Much Can Be Done in the Next Several Weeks.—In conclusion, in less than thirty days after this issue is placed in the mails, or on November 8, the forthcoming election will be at hand. Much is to be done in these few days, but much can be done. Much will be accomplished in public health and medical matters, of great importance to the profession and to the people of California, if each member, with every other member of the California Medical Association, will give proper and full support to measures such as are indicated above.

To each member, therefore, this question may be addressed : After the election is over, what will be the report you may render to yourself on these important matters? Keep in mind that the last half-dozen sessions of the California Legislature have been strenuous experiences for the medical profession. Your own inaction on and before November 8 may make for unpleasant and equally strenuous experiences for yourself in later years. Prevent such an unfortunate aftermath by doing your part in these October and November days of 1938. "An ounce of prevention is worth a pound of cure!"

TWO IMPORTANT DECISIONS BY THE CALIFORNIA SUPREME COURT: (1) HEALTH SERVICE PLAN OF THE MUNICIPAL EMPLOYEES OF SAN FRANCISCO; AND (2) ON LEGAL RIGHT OF A CORPORATION TO PRACTICE MEDICINE

Medico-Legal References Not Easily Found in Medical Indexes.—References to important medico-legal problems and principles are often difficult to find in medical literature, because the opinions of courts are often too briefly summarized, and at the same time are given merely secondary positions in the pages of medical publications. A double loss results from this practice in that physicians frequently fail to note such papers. Also, the articles, not being mentioned in the indexes as original contributions, are somewhat difficult to find when subsequent reference may be necessary.

* * *

Two Leading Cases.—On September 2, 1938, the Supreme Court of the State of California handed down two decisions that are apt to become leading cases in legal tomes. The full opinions, the one on the Health Service Plan of the Municipal Employees of San Francisco (six justices concurring and one dissenting), and the other, the case of the People of the State of California vs. Pacific Health Corporation, Inc., on the legal right of a corporation to practice medicine (four justices concurring and three dissenting), are printed in this issue on pages 302 and 306.*

In both cases, Attorney-General U. S. Webb, who, after many of years of service, will soon retire from practice—with Deputy Attorney-Generals Lionel Browne and Neil Cunningham, represented the people of the State of California and the State Board of Medical Examiners. In the Pacific Health Corporation case, Hartley F. Peart and Howard Hassard, of the legal counsel of the California Medical Association, appeared as "Friends of the Court."

The two decisions are of major importance, and merit careful perusal, because the opinions, as given expression by the Court in written word, indicate present-day trends in the legal interpretation of medical service and hospitalization problems. Such opinions by the higher courts, unless reversed, take on the same authority as established law.

Other State Association and Component County Society News.—Additional news concerning the activities and work of the California Medical Association and its component county medical societies is printed in this issue, commencing on page 318.

* For excerpts giving press comments on the decisions, see pages 302 and 336.

Duration of Smallpox Immunity.—In 1936 a study was made of smallpox immunity in 1,053 matriculating college students at Kansas State College. In September, 1937, David T. Loy and M. W. Husband, Manhattan, Kan. (*Journal of the American Medical Association,* August 27, 1938), made a similar investigation of 986 students, with additional data on the duration of smallpox immunity and the effect of multiple vaccinations. In summary they state: (1) Of the students who matriculate at Kansas State College (*a*) approximately one-fourth have never been vaccinated against smallpox and (*b*) approximately two-thirds are in some degree susceptible to smallpox. (2) Only 5.9 per cent of the 1937 group had been vaccinated more than once previously. (3) There are about 20 per cent more persons with complete immunity in the previously vaccinated one to five-year group than in the group vaccinated from six to ten years previously. (4) There are about 20 per cent more persons with complete immunity in the multiple previously vaccinated group than in the once previously vaccinated group. (5) The method of noncompulsory vaccination used has proved to be almost 100 per cent acceptable to the student group.

EDITORIAL COMMENT†

THE DOCTOR'S RESPONSIBILITY REGARDING THE HUMANE POUND ACT

For many years a certain group of people has had introduced in the California Legislature each succeeding session a bill relating to animal experimentation. Lately these bills have been termed "Pound Bills." The legislators have seen the dangers in these bills and refused to pass them.

On the November ballot an initiative will appear which is called the "Humane Pound Bill." Its number is Proposition 2. This initiative is the effort of a group determined on an objective which will destroy progress through animal experimentation. These persons misguidedly strive constantly to prevent others from increasing knowledge. This cleverly worded initiative appeals to the animal lover and sympathetic spirit of the voters under the guise of protecting the homeless, stray dog and cat while it actually makes almost impossible the use of animals for medical research. Furthermore, it destroys the sanctity of the home, where two or more dogs are kept, by calling such a home a pound and giving legal entry to that home, of an officer of any private humane society. If for no other reason, every voter should vote against this initiative if he or she believes in personal liberty and the security of his own home.

Everyone knows the ease with which a log can be split after the wedge starts the process; one knows how the house can be entered if at first a foot is placed between the door and the frame. This initiative is the opening wedge to more drastic legislation that will follow its passage as surely as night follows day, not only in California, which is now the guinea pig, but subsequently in all the other states of the Union.

Many members of this Association have been appealed to for help in defeating this initiative. The responses have been enlightening. One believes our county and state society should do all the work. Another states this is an issue directly concerning the lay public and the people should be entirely responsible. Some doctors say they have done enough toward organizations. Many leaders in their communities and members of medical faculties state frankly they are not interested. If we are not interested in our own profession, in what are we interested?

In answer to appeals, many medical, special, and lay organizations, including kennel clubs, to the number of 112, have indorsed the campaign against this initiative. These are organizations distributed throughout the United States, showing thinking men and women are aware of this imminent peril. Individual scientists in the East have recently offered material aid to California.

This initiative, in the first place, directly affects the lives and health of every citizen now living or who will be born in the future. Unfortunately, the great majority of our citizens do not know or suspect the lurking danger. Every dog owner and breeder, every farmer, sheep owner, dairy man, cattle raiser, hog raiser, and horse breeder has the financial success of his business at stake. If this initiative passes he will be deprived of means to prevent disease destroying his animals. It is true the burden will fall on the general population of the state, which benefits directly by increasing knowledge, and not the medical profession, which is the only agent delegated to use the knowledge for the benefit of the sufferer.

The proponents, as has been said, have cleverly worded an act that looks so innocent several physicians have said they see nothing in the Act to cause alarm. They fail to see what the legal profession clearly notes: such as the definition of a pound, the failure to provide for accrediting research laboratories, that animals cannot be acquired lawfully for laboratories, the obvious possibilities of persecution, that Section 10 is so severe in effect it will prevent all animal experimentation. The proponents have invaded the enemy's camp and have tried to weaken opposition by a letter received by many medical men, stating "great pains were taken to protect the interests of medical research" and "the subject of vivisection is a controversial one with fanatics on both sides." Also the letter states, "Perhaps you have a four-footed companion in your home." The fact is, out of the nine thousand physicians in California, there may be more than eight thousand families. Many doctors' families have two or more dogs or cats. It is logical to estimate five thousand pets in the medical profession. They are well cared for. There can be no lack of appreciation for animal life in this group. Yet the medical mind is capable of studying this problem from a broad viewpoint. The medically educated person knows dogs are better cared for in research institutions than elsewhere. Dogs used for long experiments lead happy lives, are well fed, and die of old age.

If medicine knows the dangers hidden in the "Humane Pound Initiative," it is medicine's duty to enlighten the electorate regarding the dangers just as a doctor would quickly label a typhoid-contaminated water supply. Every physician owes it to his community actively to engage in defeating this initiative by all the means at his disposal. Now more than ever is the truth seen in the age-old adage "In union there is strength." The health and future joy of living of this fair state needs and cries for the 100 per cent help, advice, and wisdom of the medical profession. Do, gladly, everything asked of you by those who are sacrificing much in order that this "danger to public health" may be defeated.

Keep in mind Representative Pettengill's recent statement to the professions, "The time has come when we who think alike have got to vote alike."

384 Post Street.

ELBRIDGE J. BEST,
San Francisco.

†This department of CALIFORNIA AND WESTERN MEDICINE presents editorial comments by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California Medical Association to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

EXTRAPLEURAL PNEUMOTHORAX

Extrapleural pneumothorax is one of the most recent and most promising additions to the therapeutic armamentarium of the phthisiologist. In instances where the pleural space has been wholly or partially obliterated by fibrous adhesions, a new extrapleural space may be formed by the manual separation of the parietal pleura from the overlying tissues of the thoracic cage. Such a space, filled with wax in plombage, or with soft tissues in the Semb apicolytic modification of thoracoplasty, may be kept open by the repeated introduction of air, resulting in the maintenance of an artificial extrapleural pneumothorax.

In 1936 Graf reported thirty-four cases operated within the previous two years by the utilization of this principle. Shortly thereafter Schmidt of Heidelberg reported an even larger series, using a closed technique. A recent publication by Rhodes reports that more than three hundred cases have been so treated by these pioneers, in addition to other cases operated in France, Belgium, Italy, and England. Although no American reports have so far been published, it is known that the operation is already being performed in several places in this country. No difficulty was encountered in securing a satisfactory collapse of the diseased lung in all of the first dozen extrapleural pneumothoraces established at the Olive View Sanatorium before March 1, 1938.* Complications, such as subcutaneous emphysema or bleeding into the extrapleural space, have been slight and transient. The immediate results have been highly encouraging, although the ultimate course is as yet unknown.

The technique used is as follows: An incision, 7 to 10 inches long, is made between the scapula and the spine, under local anesthesia. A short posterior segment of the third or fourth rib is resected, the parietal pleura is identified and gently separated from the endothoracic fascia with the fingertips and a blunt instrument, to the level of the third rib anteriorly and the sixth or seventh posteriorly. The space is then filled with salt solution, and the wound is closed tightly. At the end of forty-eight hours, saline and serum, if present, are aspirated and replaced with air. Later, insufflations are given under fluoroscopic and x-ray control. The technique is similar to that for intrapleural pneumothorax, except that the air is injected under positive pressures as high as from 30 to 50 centimeters of water.

This procedure appears to be indicated especially in cases where intrapleural pneumothorax has been attempted, but found impossible or unsatisfactory because of the presence of adhesions not amenable to pneumonolysis. Because of its selective compression over the upper lobes alone, it may prove preferable, in many instances, to phrenic paralysis or pneumoperitoneum where these are now recommended. In patients in whom thoracoplasty is contraindicated because of age, low cardiac or respiratory reserve, or other poor condition, or because the lesions are bilateral or the patient refuses such an extensive mutilation as may be otherwise required, the absence of shock, conservation of residual lung function, and physiological similarity to the well-established intrapleural procedure make extrapleural pneumothorax particularly desirable.

* TABLE 1.—*Summary of the First Twelve Cases of Extrapleural Pneumothorax at Olive View*

	Number
Sex:	
Male	7
Female	5
Age:	
Under 20	1
20-30	5
30-40	6
Complications:	
Lues	2
Tuberculous tracheobronchitis	2
Contralateral	2
Side:	
Left	8
Right	4
Location:	
Apex	10
Midlung	2
Size cavities:	
Under 3 centimeters	5
3-4 centimeters	5
4 centimeters	2
Interval since operation:	
5 months	1
4 months	1
1 month	5
Less than 1 month	5
Maximum fill:	
Under 200 cubic centimeters	7
Over 200 cubic centimeters	5
Vital capacity diminution:	
Average 600 cubic centimeters.	
Sedimentation rate:	
Slower	2
Faster	5
Untested	5
Sputum:	
Conversion	8
Unchanged	2
Untested	2
Ancillary treatments:	
Phrenics	9
8 homolateral, 1 contralateral.	
Pneumoperitoneum	3

JOHN C. JONES,
Los Angeles.

JANE SKILLEN,
Olive View.

FRANK S. DOLLEY,
Los Angeles.

PRAUSNITZ-KÜSTNER REACTION IN RHESUS MONKEYS

In 1921 Prausnitz and Küstner,[1] of the University of Breslau, discovered the possibility of a local serum transfer of clinical allergy to normal human skin. They, however, were unable to effect a similar transfer to rabbits or guinea pigs. Seven years later Dr. Ella F. Grove[2] of Cornell University concluded that such transfer was also impossible in chimpanzees. By a slightly different technique, however, Dr. A. H. W. Caulfield[3] of the Connaught

1 Prausnitz, C., and Küstner, H.: Centralbl. f. Bakt., 86:160, 1921.

2 Grove, E. F.: J. Immunol., 15:3, 1928.

3 Caulfield, A. H. W., Brown, M. H., and Waters, E. T.: Proc. Soc. Exper. Biol. and Med., 35:109, 1936.

Laboratories, University of Toronto, and more recently Dr. Henry W. Straus[4] of the Jewish Hospital, Brooklyn, New York, have reported successful transfer to rhesus monkeys. To effect this transfer, it was necessary to inject relatively large doses of undiluted human asthma serum into the most superficial layers of monkey skin, and to test the resulting sensitized areas with relatively large doses of specific protein. The protein test could be made either intracutaneously or by the intravenous route.

They emphasize the fact that in monkeys the nature and appearance of the local allergic skin reaction differs from the classical description of the Prausnitz-Küstner phenomenon in man. The first evidence of a positive reaction in monkeys is a sudden erection of local hair follicles, producing an irregular area of "goose skin" 1 to 2 inches in diameter. Wheal formation then follows, resulting in an ivory-white, flat, more or less elevated patch of induration with a sharply defined, but serrated border. As the wheal increases in size, it sends out pseudopods of varying size. Maximum wheal formation is usually observed within thirty minutes, followed by slow and gradual fading of the edema. In most monkeys the edema completely disappears within six hours. Erythema and pruritus, the dominant features of the Prausnitz-Küstner reaction in man, is rarely observed in monkeys. The thirty-minute wheal is readily recorded by photographic methods.

The successful transfer of specific protein sensitivity to the skin of monkeys is a valuable addition to current research technique. Its possible application to basic physiological research is well illustrated by its current use in a study of protein absorption from the gastro-intestinal tract of monkeys. Straus and Walzer[5] selected the serums of two patients highly allergic to peanuts and cottonseed. Five monkeys were sensitized locally by the intracutaneous injection of 0.05 cubic centimeter of these serums. Two to four days later they were given homologous protein meals by means of a nasal catheter. Within from five to twelve minutes after this gavage, specific "goose skin" reactions were noted on the local skin areas. Wheal formation soon followed and persisted for about four hours.

The only way to account for this observation with our present knowledge of immunochemistry is to picture gastrointestinal absorption of undigested food proteins as a normal physiological process. Whether or not this absorption takes place through the gastric mucosa or only after passage of food proteins to the duodenum has not yet been determined.

Box 51.

W. H. MANWARING,
Stanford University.

[4] Straus, H. W.: J. Immunol., 32:251, 1937.

[5] Straus, H. W., and Walzer, M.: J. Allergy, 9:121 (Jan.), 1938.

"It is a fact that some counties in the United States are too sparsely settled or too poor to support a dentist. One solution for the dental problem in these areas, is to take the dental service to them. Unless the dental and public health professions can devise some means of attracting dentists to the smaller communities, well able to support them, dentistry may have to be taken to these people also."—*The Health Officer.*

ORIGINAL ARTICLES

CALIFORNIA HUMANE DOG-POUND LAW

AN ANTIVIVISECTION MEASURE UNDER A NEW NAME

Foreword.—California's state election ballot of November 8, 1938, among proposed laws to be enacted by initiative vote of the electorate, will list, as Proposition No. 2, a measure that has been widely publicized in the press of the State, as the "Humane Dog-Pound Law." To secure for it a place on the ballot, it was necessary to procure for this proposed legislation the valid signatures of 186,387 citizens, with their proper precinct allocations. Among the militant forces behind the proposed law are individuals and groups who, in the past, have been closely identified with anti-vivisectionist endeavors. The sources of funds, for use in publicity and propaganda for the measure, we do not know.

In California, the gage of battle thrown down by the proponents of the Humane Dog-Pound Law—Initiative Proposition No. 2—has been taken up by the California Society for the Promotion of Medical Research.†

In former years at recurring sessions of the California Legislature, it has been necessary for the friends of public health to use their best efforts to overcome proposed legislation of an anti-vivisectionist type, and especially so in the legislature of the year 1935. At that time, in CALIFORNIA AND WESTERN MEDICINE (issues of October, 1934, on page 247 and of November, 1934, on page 325), appeared two articles contributed by A. C. Ivy, Ph.D., M.D., professor of medicine at Northwestern University, in which the topics, "Some Contributions by Animals to Human Health" and "Seven Wonders of Medical Science—Modern Miracles" were presented in an illuminating and convincing manner. Later in December, 1934, these articles, with one by Chester Rowell, LL.D., that had appeared in the San Francisco *Chronicle* of March 9, 1933, were brought off the press in the form of a special reprint.

The fundamental truths so clearly expressed by Doctor Ivy and Mr. Rowell in the articles referred to above are as sound and as applicable today as they were four years ago.

CALIFORNIA AND WESTERN MEDICINE therefore gives them their present position in this October issue to again bring to the attention of the readers of the OFFICIAL JOURNAL, the significance and implications of the Humane Dog-Pound Law, which will have a place on the November 8, 1938, state election ballot as Proposition No. 2.*

† Offices of the California Society for the Promotion of Medical Research are located at 309 Pine Street, San Francisco (telephone SUtter 8118).

* See also articles in this issue, as follows: pages 252; 254; 257-265; 324; and 343-344.

SOME CONTRIBUTIONS BY ANIMALS TO HUMAN HEALTH*

By A. C. Ivy, Ph.D., M.D.
Chicago, Illinois

INTRODUCTION

THE most universal curse on all living things is disease. Yet, how many people truly realize what biological science has done to eradicate disease from plants, animals and man. Very few, indeed. Why? Because our school histories record the story of wars, political events, and discoveries pertaining to improvements in methods of communication and transportation and say nothing, or little, of the ravages of pestilence and epidemic disease which has so frequently stricken mankind with horror and has ruthlessly destroyed the lives of hundreds of thousands of people.

In 1911 the average span of life was approximately fifty-three years. Today it is sixty years. This means that there are thirteen million people alive in the United States today who would otherwise be dead if the average life span of even the year 1911 still held in 1934.

Most of the medical science that we know today has been discovered within the past one hundred years. The average span of life one hundred years ago was thirty-five years. This means that if the average span of life had not increased to its present mark, fifty million people living in the United States today would be dead; almost one-half of the population.

If the increase of the average span of life, which affects the pocket book of every person who has an insurance policy and pays taxes, has not been due to medical science, to what has it been due? A frequent reply is "sanitation." The person who usually makes such a reply is ignorant of the fact that sanitation is the product of medical science and is universally directed and supervised by medical scientists. They forget that the Panama Canal could not be built until after the cause of yellow fever was discovered. They forget that chlorination of city water supplies could not be practiced until it was discovered that chlorination would kill typhoid germs and that typhoid was due to a specific germ. They forget that plague could not be effectively stopped until it was found that it was due to a germ and that the flea, rat and ground squirrel may carry the germ. They forget that when crops are threatened with disease, when animals are dying of unknown cause, and communities are stricken with the horror of epidemic disease, the legislators and citizens look immediately to biological and medical scientists for aid and relief.

It is sad, but nevertheless true, that sixty persons die every hour in the United States—we believe the most enlightened and humanitarian country in the world—of a preventable disease, such as smallpox, diphtheria, typhoid, plague, etc. This is not due to the lack of information on the part of medical science, but it is due either to the prejudice, ignorance or negligence of the public and law makers. This is plain language, but history reveals that it takes plain language to cause people to appreciate the truth. To be tactful is wise; to mince words is to manifest a lack of courage and to subvert the truth.

How is medical progress and science effected? It is effected in a combination of three ways. One is the discovery of a disease, its identification and natural history. Another is the application of physiology, its principles of function and how function is affected by disease. And, the third is experimental work on patients. The humane use of animals is absolutely necessary. Animal experimentation is the outstanding method of medical science. In biology living things must be used; in physics and chemistry inanimate things are used. *Animal experimentation* is not only humane, but is a manifestation of the highest type of humanity in that it *prevents unnecessary and random experimentation on man.*

Since one of the aims of the Century of Progress was to educate and lead people to appreciate the good that man has derived from the scientific advancement of the past one hundred years, the medical scientists of Northwestern University thought it was fitting that some of the contributions made by the helpers of man—the lower animals—to human and animal welfare alike, should be exhibited. A modest, inexpensive exhibit was all that could be afforded. In spite of the fact that the subject could only be exhibited very incompletely and without drama and a loud noise, the exhibit has attracted much attention and has been of definite educational value.

At the request of the editor of CALIFORNIA AND WESTERN MEDICINE, the following outline of the exhibit is submitted:*

I

CONTRIBUTION OF ANIMALS TO HUMAN HEALTH

Mouse and Rat

CANCER

Heredity is an important factor in cancer of mice. It is not known to be so important in humans. "Tar cancer" can be induced in mice by the application of coal tar. Transplantation of cancer from mouse to mouse reveals the danger of handling cancers roughly. These little animals may help solve the riddle of cancer.

PNEUMONIA

Pneumonia is caused by the predominance in the lungs of one of several types of pneumococcus organisms. The mouse is used to diagnose the type, to determine the special kind of serum for treatment, and to standardize these serums which aid the patient to recover.

VITAMINS

Rats, because of their size and response, are ideal subjects for the study of these essential factors.

Vitamin A — *Growth-Promoting*

Vitamin A is found most abundantly in butter, milk, egg-yolk, tomato, carrot, cod and haliver oils. Its absence from the diet causes failure of growth, disturbances of vision, keratinization of epithelial membranes, lowered resistance to infection, even sterility.

* EDITOR'S NOTE: This article presents the explanatory legends used in one of the exhibits of Northwestern University at the Century of Progress Fair at Chicago, to which editorial reference as made in the October, 1934, issue. CALIFORNIA AND WESTERN MEDICINE is indebted to the courtesy of Professor Ivy not only for these legends, (to secure which it was necessary for him to send an assistant to the Fair Grounds to make a copy), but also for the introductory comments which are here printed. [Oct., 1934.]

* EDITOR'S NOTE.—On the walls of the exhibit booth, to the left of these explanatory legends, were grouped specimens, sections, and photographs, designed to clarify the statements made in the text of the legends.

Vitamin B *Beriberi*

Vitamin B is found most abundantly in whole cereal grains, yeast, egg-yolk, and green vegetables. Its absence from the diet causes beriberi, nervous disturbances, poor lactation, decreased appetite, and loss of tone of the gastro-intestinal tract.

Vitamin C *Scurvy*

Vitamin C is found most abundantly in oranges, limes, lemons, tomato juice, cabbage, and most fresh vegetables. Its absence from the diet causes scurvy and diseases of the gums and teeth. (The guinea pig is used in vitamin C experiments.)

Vitamin D *Rickets*

Vitamin D is found most abundantly in oranges, cod- and tuna-liver oils, and is also produced by the exposure of ergosterol to ultra-violet. The body, upon exposure to sunlight, is able to produce this factor. Its absence from the diet results in faulty dentition and poor bone formation.

Vitamin E *Fertility*

Vitamin E is found most abundantly in wheat germ, lettuce, and watercress. Its absence from the diet of the rat causes a failure of reproduction (sterility.)

Vitamin G *Pellagra*

Vitamin G is found most abundantly in yeast, glandular organs used for food (liver and kidney), fresh leafy vegetables, bananas, and tomatoes. Its absence from the diet results in skin eruptions, gastro-intestinal and nervous symptoms (pellagra). The distribution of yeast by the Red Cross to the people in the depression stricken areas of the South has almost eradicated this "depression disease."

Guinea Pig

DIPHTHERIA AND TETANUS

Antitoxins have reduced the death rate from diphtheria and tetanus. The potency of each lot of antitoxin can only be determined by testing its power to protect guinea pigs against a fatal dose of diphtheria or tetanus toxin.

TUBERCULOSIS

Tuberculosis of the kidney can be detected in its early stages only by injecting sediment from the patient's urine into a guinea pig and noting certain diagnostic signs.

This is a most delicate and valuable test.

DIPHTHERIA

Guinea pigs are used:

To test toxin for use in the Schick test to determine susceptibility to diphtheria.

To test toxoid for preventive immunization against diphtheria.

To test the virulence of the germ in cases of diphtheria carriers.

SYPHILIS

The guinea pig furnishes the "complement" for the Wassermann or blood test for syphilis.

This test is of great value in diagnosing and controlling treatment of the disease.

GLANDERS

Glanders in man and in the horse is almost invariably fatal.

The guinea pig is a valuable aid in diagnosing and, therefore, in preventing this disease.

INFECTIOUS JAUNDICE

Infectious jaundice (Weil's disease) can be readily diagnosed by injecting the patient's blood or urine into a guinea pig.

HYDROPHOBIA

Injection of an emulsion of the brain of a dog suspected of having rabies into the brain of a guinea pig will establish the diagnosis in doubtful cases; effective treatment may then be instigated.

Dog

ETHYLENE ANESTHESIA

In searching for a less upsetting anesthetic than ether, the superior properties of ethylene gas were discovered. This and many pain-killing and sleep-producing drugs used in medicine have been discovered by using the dog as an experimental animal.

HOOKWORM INFECTION

The parasite called "hookworm" infects the intestines of man and dog.

Experiments to relieve the dog of this destructive parasite led to the discovery of drugs which eliminate the worm from man and dog without harm to the host.

SURGICAL ADVANCEMENT

Many new and difficult operations have been first tried and perfected upon an anesthetized dog. Much of the pioneer knowledge of delicate brain, nerve, lung, heart, stomach, and blood-vessel operations we owe to the assistance of these canine helpers.

INSULIN FOR DIABETICS

The experimental removal of a dog's pancreas caused sugar to appear in the urine.

The "laboratory" diabetes thus produced resulted in the discovery of insulin, which is an extract of beef pancreas. Two million in the United States will benefit from this discovery.

ADDISON'S DISEASE

When the tiny adrenal glands of a healthy dog were removed the dog died with symptoms like those of a man afflicted with the always fatal Addison's disease. An extract from these same glands yielded "cortin," which today relieves the sufferers of this formerly fatal disease.

STOMACH

Gastric Ulcer *Digestion*

This photograph* is of Ajax, a dog living happy and well, ten years after the removal of his stomach. The information thus gained has been applicable to patients suffering from stomach diseases such as ulcer, indigestion, and pernicious anemia.

LIVER

Anemia Prevented and Relieved

Feeding liver to dogs with anemia (pale, thin blood) caused red blood corpuscles to be abundantly formed. This discovery has made possible the control of pernicious anemia in man by using fresh liver or concentrated liver extract.

GALL-BLADDER

Gall-Bladder Colic and Stones

It was found that certain substances could be administered to a dog that were secreted in the bile, which made an x-ray of the gall-bladder possible. Applying this fact to man, the gall-bladder can be seen to fill and empty, thus detecting disease and stones.

PARATHYROID

Nervousness and Convulsions

When a dog's parathyroid gland is removed a nervous excitable state with convulsions, and even death, results, due to the inability of the body to use its lime or calcium. Extracts from this gland now save the lives of many patients.

RICKETS

Bone Deformity *Growth-Stunting*

Rickets was formerly a common disease.† Now, due to experiments upon puppies, it is possible to prevent deformities through dietary management.

Rabbit

Syphilis *Wasserman or "Blood Test"*

From the rabbit is obtained one essential ingredient of the test—the "amboceptor." This is often the only means of diagnosing this disease.

Pregnancy *Modified Aschheim-Zondek Test*

The rabbit is used in this very reliable test for pregnancy in its earliest stages and for the differential diagnosis of a special type of tumor (chorio-epithelioma).

Diabetes *Assay of Insulin for Treatment*

Overdoses of insulin cause convulsions, unconsciousness, and even death. The potency of each lot of insulin must be tested on rabbits before it is given to human patients.

---

* Reference is to the photograph of the dog named Ajax, placed to the left of the legend.

† This legend referred to accompanying photographs of puppies.

Hydrophobia *Anti-Rabic Virus for Its Prevention*

This efficient prophylactic against this terrible and always fatal disease is the injection of ground-up, dried spinal cord or brain of a rabbit dead of rabies.

Cancer *Its Experimental Production*

Two Japanese scientists discovered that painting a rabbit's ear with tar produced cancer. Much of our modern knowledge of cancer has resulted from this discovery.

Anemia *Diseases of the Blood-Forming Organs*

The red cells and leukocytes of the blood are formed in the bone marrow, which can be studied very conveniently in rabbits. Much has been learned from this source.

Horse

Antiserums

Horses produce the antiserums used successfully in the treatment or prevention of diphtheria, tetanus (lockjaw), epidemic meningitis, snake bite, botulism, pneumonia, and of scarlet fever.

Cow

Smallpox *Vaccine*

This vial contains the lymph from cowpox pustules produced by inoculating the shaved and scarified skin of healthy calves with cowpox virus. Vaccination, discovered by Doctor Jenner in 1798, has reduced smallpox from the terrible pestilence of the eighteenth century to its present rare occurrence in the twentieth century.

ENDOCRINE PRODUCTS

From cattle slaughtered for meat are obtained most of the gland extracts used in the treatment of endocrine deficiencies, such as thyroxin for cretinism and myxedema, parathorome for tetany; and insulin for diabetes.

PERNICIOUS ANEMIA

Extracts of the liver of cattle and of other animals furnish a specific treatment for this disease so uniformly fatal before this method was discovered by experiments on dogs.

Monkey

By the use of the monkey much has been learned concerning the virus diseases which are not transmissible to other laboratory animals. Among these are especially:

INFANTILE PARALYSIS

From the monkey it has been learned that this disease is infectious, that the virus passes from the nose to the central nervous system; that a protective substance is present in the blood serum of many normal adults and can be used in the treatment of the disease.

YELLOW FEVER

By using the monkey a practical method of protective immunization of humans against this disease has been discovered. Had this been known five years ago the lives of Doctor Noguchi and other martyrs to this disease would have been saved.

II

DISEASES TRANSMITTED FROM ANIMALS TO MAN

Cattle

Undulant fever—Called "infectious abortion." Transmitted to man by milk.

Tuberculosis—Transmitted by milk from tuberculous cows, especially to children.

Septic sore throat—An acute disease acquired from contaminated milk.

Anthrax—Acquired by man from handling the hides of cattle dead of anthrax.

Actinomycosis—Called "lumpy jaw" in cattle. A chronic and usually fatal disease in man.

Tapeworm—Taenia saginata is acquired by eating uncooked infested beef.

Cowpox—A mild disease in man that protects him from smallpox. Observation of this fact led Jenner to the discovery of vaccination.

Swine

Trichinosis—A very painful and often fatal disease acquired by eating uncooked or poorly cooked "measley" pork or sausage.

Tapeworm—The tapeworm, Taenia solium, is transmitted to man by infested uncooked pork or sausage.

Roundworm—This intestinal parasite may be acquired by man from the pig.

Parathyroid fever, undulant fever, anthrax, and *tuberculosis* may be transmitted to man from swine.

Goat

Undulant fever—Also called "Malta fever." It is acquired from the milk of infected goats.

Sheep

Anthrax—Sheep are the most common source of this fatal disease which occurs in man in three forms: "wool-sorter's disease," intestinal anthrax, and malignant pustule. Other diseases acquired from sheep are: *Foot and mouth disease and liver flukes.*

Mouse

Bubonic plague, tularemia, amebic dysentery, trichina, are spread to man by the mouse.

Rabbit

Tularemia—The rabbit is the chief source of infection in this very severe disease.

Fish

Tapeworm—The "fish tapeworm," Diphyllobothrium latum, is acquired from eating uncooked infested freshwater fish. Its presence in man causes a severe anemia.

Parrot

Psittacosis—A severe and often fatal disease transmitted to man.

Dog

Echinococcus disease—Taenia echinococcus, a small tapeworm which sometimes inhabits the intestine of dogs, gives rise in man to cysts that may be the cause of death.

Hydrophobia—The dog is the animal chiefly responsible for the perpetuation of this disease, so fatal to both man and dog.

Tapeworm—A tapeworm, Diphyllidium caninum, may be acquired by man (especially children) from the dog.

Mange—Of the three types of mange from which dogs suffer, one is transmissible to man.

Ringworm—The dog is subject to four types of ringworm which it may occasionally transmit to man.

Scarlet fever—Dogs are susceptible to the scarlet fever germ. Close association of a dog with a child suffering from this disease may endanger other children.

Cat

Hydrophobia—The cat may transmit this disease to man; however, it is not so great a menace as is the dog.

Poliomyelitis (infantile paralysis)—Cases of apparent transmission of this disease to man are on record.

Rat-bite fever—The cat may carry the germ of this disease.

Giardia—An intestinal protozoön which may be acquired by man from the cat.

Rat

Entameba histolytica—The microörganism of amebic dysentery may be harbored by the rat and transmitted to man.

Trichinosis—The rat is the chief source of infection of swine and, therefore, responsible for the perpetuation of the disease.

Bubonic plague—The rat is the chief means of the spread of this terrible disease, especially in cities.

Rat-bite fever—A chronic, disabling disease acquired from a rat bite.

Tularemia and *tapeworm*—Diseases occasionally transmitted from rats to man.

Horse

Glanders—This is the most serious and frequent disease transmitted from the horse to man. It is fatal to both.

Actinomycosis, foot and mouth diseases, hydrophobia, are diseases occasionally acquired by man from the horse.

Northwestern University,
303 East Chicago Avenue.

SEVEN WONDERS OF MEDICAL SCIENCE—MODERN MIRACLES*

By A. C. Ivy, Ph.D., M.D.
Chicago, Illinois

JUST as nature forces animals and plants to adapt themselves to their environment in order to survive, nature impels man to invent and discover the ways and means for exercising a greater control over his environment in order that his life may be easier and more complete.

The ant and the bee labor and save and have a highly organized society, but they do not progress appreciably. It is man's ability to improve his workmanship, his ability to discover and invent, that makes it possible for him to progress. In order to invent and discover, man must use either the uncertain empirical method which is based chiefly on guessing and faith, or the more certain scientific or experimental method which is based on the discovery of the laws of nature, their analysis and practical application.

It is through the use of the scientific method of controlled experimentation, which yields a knowledge of the fundamental principles of nature, that man during the past two centuries has achieved such a remarkable understanding and relative control over his environment. It is through animal experimentation to a large extent that man has achieved his present success in the battle against disease—a battle which, of course, is still under way. Only through a perusal of history may one gain an appreciation of *the horrors of disease* from which present-day civilization has been more or less freed through the application of the discoveries of medical science.

SEVEN WONDERS OF MEDICAL SCIENCE

Seven wonders of medical science may be described briefly as follows:

1. *Anesthesia and analgesia,* which gives us relief from pain and have liberated us from the pain of operations without anesthetics.

2. *The germ causation of infectious diseases,* which has made possible the obliteration of the horrors due to cholera, plague, yellow fever, childbirth fever, typhoid, etc., from intelligent and well-governed communities.

3. Our present knowledge of *immunity and body resistance to disease,* which would eradicate smallpox and diphtheria from the face of the earth if put into universal practice. This also includes our knowledge of specific "antisera" against lockjaw, diphtheria, scarlet fever, rabies, specific meningitis, etc.

4. *Antisepsis and asepsis,* a knowledge of which makes possible the prevention of wound infection and blood poisoning, and operations on all diseased organs.

5. *Knowledge of symptoms, which is based on a knowledge of physiology.* Symptoms result when the physiology of an organ is disturbed, and only when the functions of organs are known can disease of an organ be accurately determined. The use of x-rays helps tremendously.

6. *Organotherapy, which is based on a knowledge of physiology.* For examples, we may cite the use of *insulin* in diabetes, *thyroid extract* in certain children showing undergrowth and poor mental development, *liver extract* in *pernicious anemia,* etc.

7. *Animal nutrition and vitamins,* as related to growth and the prevention of such diseases as rickets, scurvy, polyneuritis, pellagra, etc.

Our knowledge of nutrition and the vitamins has also rendered it possible to increase our food supply, to prevent certain chronic diseases and malnutrition in children, and in times of war and economic depression to balance diets so that "war edema" and other evidences of malnutrition may be prevented.

We should add to this list the growing appreciation among the medical profession and laity of the necessity and importance of periodic health examination to discover in the individual the early signs of impending chronic diseases—for example, the discovery of *cancer* in its early stages when a *cure is possible.*

It should be realized that cancer is one of the most fundamental and difficult problems that confront biologic science. It involves the question of growth, because all cancerous tissue possesses the common habit of disorderly growth. Such fundamental questions cannot be answered in a brief period of time, and can only be answered by long-continued and intensive study. But the fight is on and much progress has been made. Cancers have been transplanted from one animal to another of the same family. They have been produced experimentally through chronic irritation. Some cancers have a distinct hereditary tendency. It is by such knowledge, gained through animal experimentation, that the war on cancer, which kills more than one hundred thousand persons yearly in the United States, will be won.

DISCOVERIES RESULTING SOLELY OR CHIEFLY FROM EXPERIMENTS ON DOGS

1. *Insulin,* which controls *diabetes* in man and dog. There are one million people living in the United States today who now have or later will develop diabetes, and who will have their *lives prolonged and enriched* by the use of insulin. This discovery was made solely on dogs.

2. *Liver extract for pernicious anemia.* Liver extract causes the blood to *return to normal* in patients afflicted with this disease. Liver was found to be a good food for anemic dogs. This was applied to patients with miraculous results.

3. *Treatment of parathyroid tetany.* Prior to 1925 practically all patients afflicted with this dreadful disease died. *Today no patient need die of this disease.*

4. *Ethylene anesthesia.* The discovery of many and our knowledge of the action of all anesthetics and sleep-producing drugs have come chiefly from experiments on dogs.

* EDITOR'S NOTE: This is an abstract of an unprinted lecture by Dr. A. C. Ivy, professor of physiology and pharmacology, Northwestern University, Chicago, Illinois. CALIFORNIA AND WESTERN MEDICINE is indebted to Professor Ivy for his permission to print this excellent defense of animal experimentation. [Footnote printed in 1934.]

5. *Ether,* which has been called the "greatest gift of medicine to mankind," was first tried out by Dr. W. T. G. Morton in a series of experiments on his own dog. His success in the dog led to a trial in man.

6. *Rabies treatment.* The use of the Pasteur treatment for rabies (mad-dog bite) has reduced the mortality from 16 per cent to less than 1 per cent. There is a *preventive treatment for dogs* which protects them to a great extent against this disease.

7. *Hookworm cure.* The hookworm infests both man and dog. *One hundred million persons* in our own and in tropical countries are infested with this parasite. Most all we know about this parasite resulted from studies on the dog. Carbon tetrachlorid was found to rid the body of hookworm. Then, tetrachlorethylene was found to be as effective but less toxic to the patients. More than fifteen million treatments have been given to dogs and human beings.

8. *Treatment of Addison's disease.* Addison's disease is caused by disease of the adrenal glands. *These patients die slowly.* Recently it has been discovered by experiments on dogs and cats that *this disease can be controlled* by the administration of appropriate *extracts of the adrenal glands.*

9. *Contributions to chemical warfare service:*

(*a*) A satisfactory treatment for phosphorus burns.

(*b*) A satisfactory treatment for burns and other effects caused by poisonous gases.

(*c*) An improved method for treatment for lung irritants like phosgene.

(*d*) Effects of gas (automobile exhaust, cooking gas) poisoning and process of recovery.

(*e*) Facts bearing on shell shock.

(*f*) Facts bearing on treatment of traumatic shock, or shock following severe injury.

10. *Methods of resuscitation:* In drowning, coal-gas poisoning, and electrocution, cyanide poisoning.

11. Almost all we know about the *stomach, intestine,* and *liver.*

12. Much that we know about *heart action* and the effects of drugs on it.

13. Much that we know about *dropsy,* and *kidney disease.*

14. The accuracy of the indirect method of measuring *blood pressure* in man. When the physician takes the blood pressure, he and his patient should remember the *debt owed to the dog.*

15. Development of new operations:

(*a*) On the heart and its valves.

(*b*) On the lungs.

(*c*) On the blood vessels.

(*d*) On the brain.

(*e*) On the stomach and intestines.

(*f*) On the blood transfusion.

(*g*) On the ovaries and womb.

16. *Rickets,* a common disease that affects children and young animals. The first experiments bearing on the cause and cure of this disease were performed on puppies. Now *this disease can be prevented and cured.*

17. *Antidotes* to veronal and luminal (sleeping drugs) poisoning.

18. *On the action of some powerful drugs.* The action of a number of medicines: *epinephrin,* which is used to check hemorrhage and to abolish distress in asthma, is tested on dogs by United States Government requirement. *Pituitrin,* a drug used in childbirth, is tested on guinea-pigs and dogs. *Wood alcohol* was first shown to be harmful by experiments on dogs, and the cause of "ginger jake paralysis" was found by studies on the dog.

TO SUMMARIZE

The dog's contribution to our knowledge of the function of the organs of the body would fill a volume. Scientists, who know their business and duty to society, just as the lawyer, banker, engineer, and architect know their business and duty, hold that the dog is necessary for experimental purposes. Detailed reasons cannot be pointed out to lay persons, because they do not know enough anatomy and physiology. But the following general statements can be made: *Dogs are necessary* because—

1. They can live a healthy life in relative confinement.

2. They are large and their structures can be easily operated.

3. Like man, they eat all kinds of foods.

4. They have diseases in common with man.

5. Structurally and functionally they are very similar to man.

6. They are so numerous that in large cities thousands are picked up and killed yearly. Of these, a small number are drafted for humane experiments, the results of which serve dog and man alike.

When a dog is operated on, it is put to sleep or a powerful pain-killing drug is used.

WHAT SCIENCE HAS DONE FOR THE DOG

1. We can now prevent and cure rabies in the dog.

2. We can now kill the hookworm, which infests dogs as well as man and which makes it difficult for dog fanciers to raise dogs.

3. We can now prevent and cure blacktongue in the dog.

4. We can do much to prevent and control distemper. The treatment is not perfect and further experiments must be done on the dog for the good of the dog.

5. We are now working to find a medicine that will kill the cruel heartworm in the dog.

6. We know how to operate on the dog and cure certain diseases of the thyroid gland and intestines.

7. We are learning about "puppy birth" in the dog which is important to dog fanciers.

8. We can prevent diseases in the dog due to improper food. Dogs need vitamins just as other animals do.

WHAT HAVE THE OPPONENTS OF ANIMAL EXPERIMENTATION DONE FOR EITHER MAN OR DOG?

Nothing! The opponents of animal experimentation, known also as antivivisectionists, would prevent experiments on dogs for the sake of dog-

kind. Antivivisection would make it impossible for veterinary science to experiment on one dog for the sake of dogs as a group.

Also, the opponents of animal experimentation themselves profit daily from the benefits of animal experimentation. They do not sense the fact that city life could not exist as we now know it if animal experimentation had not been practiced in the past. Without the knowledge which has come from animal experimentation, the grim specters of plague, typhus, yellow fever, malaria, and typhoid would still be rampant among us. Diphtheria would still take its toll of children's lives. Surgery would be primitive and anesthesia inadequate and unduly dangerous. Our knowledge of the function of the organs of the body and of life processes upon which the progress of medicine and the diagnosis of disease depends, would not have been gained, unless cats, dogs, guinea-pigs and other laboratory animals had been used. Scientific knowledge and the discoveries of medical science do not fall from the heavens like the manna upon which the children of Israel fed, but must be obtained through the arduous and persevering use of the scientific or experimental method. This method is the only known and proven method by which the warfare on disease may be conducted adequately and effectively. The opponents of biologic and medical progress would abolish this method, the use of which has been and still promises to be of such tremendous value to mankind.

It should not be forgotten that when crops are threatened with parasites, when farm animals and the human family are threatened by an epidemic disease, the legislators and citizens turn to the biologist and medical scientist for aid, and that the work of public health agencies are carried on either by, or under the direction of men and women trained in the medical sciences. The public has and must continue to manifest confidence in the moral and intellectual integrity, the sincerity of purpose and the humaneness of its biologists and medical scientists. The public must support them in their work, if in the future the public shall expect to benefit to a maximum extent, as it has in the past by expert advice, because expert advice is based on scientific facts which come from experimentation.

TRUSTS OPPOSING ANIMAL EXPERIMENTATION NOT CHARITABLE

"Animal experimentation as a means of promoting human and animal welfare has recently received the sanction of two tribunals of great importance, one in the United States and the other in England."

In the American case, the United States Board of Tax Appeals (25 B. T. A., Penn. Co. Insurance on Lives and Annuities, Executive Estate of A. S. Logan, deceased, petitioner v. Comm. Int. Rev., respondent) held that a bequest to a society organized for "the total abolition of all vivisectional experiments on animals and other experiments of a painful nature" was not a bequest to a corporation organized and operated exclusively for the prevention of cruelty to animals, and that the amount of such a bequest could not be deducted in computing the federal estate tax.

In the English case the Court of Appeal (The Law Journal, 71:329, 1931) raised the question whether "in the light of later knowledge in regard to the benefits accruing to mankind from vivisection," bequests designed to hinder and prevent vivisection would today be regarded as charitable bequests. On appeal, the House of Lords forbade the use for antivivisection propaganda of any part of the legacy concerning which the question was raised.

"Probably these two decisions represent the general trend of mature and cultured thought on the subject of animal experimentation, when uninfluenced by lurid appeals to the imagination. Both decisions were based on the orderly presentation of legal evidence, not on such clamorous, virulent, emotional speech-making as commonly fills the air when animal experimentation is discussed" by antivivisectionists before legislative committees.

Northwestern University,
303 East Chicago Avenue.

SOME OPINIONS ON ANIMAL EXPERIMENTATION

JANE ADDAMS, Hull House, Chicago: Dr. A. J. Carlson, a distinguished professor of the University of Chicago, during the World War made a most valuable study of the piteous children who were suffering from starvation, and for months worked on their behalf in southeastern Europe. Immediately after the war I accompanied a scientific friend, whose discoveries in industrial diseases have necessitated research with living animals, in a survey of the war children throughout one country after another.

It is impossible to associate either Doctor Carlson or Dr. Alice Hamilton with inhumanity or lack of tender care for helpless creatures; to charge them, or their scientific colleagues, with cruelty is utterly to misapprehend them and their motives.

* * *

CHARLES W. ELIOT, LL.D., President-Emeritus, Harvard University: We owe to scientific experimentation on animals the means of saving hundreds of thousands of children within the past fifty years, and untold millions of children in the coming years. But it is not human beings alone that owe an immense debt to modern animal experimentation. Animals also owe to vivisection great deliverance from disease and death. All the agricultural industries in the United States are deeply indebted to animal experimentation.

* * *

HARRY PRATT JUDSON, until recently president of the University of Chicago: Men of real scientific attainments must not be prevented from pursuing their investigations for the benefit of humanity by idle sentimentality.

* * *

HIS EMINENCE, DENIS CARDINAL DOUGHERTY, Archbishop of Philadelphia, Pa.: To forbid vivisection would be to hamper science, do a mischief to the human race, and foster misplaced sympathy.

* * *

RIGHT REVEREND C. H. BRENT, Bishop of Western New York: I sincerely hope that the efforts made by the antivivisectionists to eliminate this mode of scientific investigation will not meet with success.

* * *

REVEREND JOHN HAYNES HOLMES, Minister of the Community Church, New York: As regards the surgeons who are engaged in this business of vivisection, I have to state that I do not believe for a single moment the charges

that are so wantonly brought against them. I know some of these men. I have met the most distinguished of them, who has been for years under most virulent attack. I have gone through his laboratories, I have witnessed his performance of a vivisection experiment, which was of the character of most severe major operations. To accept the charges of cruelty against scientists of this type—this is a thing impossible to me.

* * *

ERNEST THOMPSON SETON: I learn now from your reply to the Baynes article that you (the opponents of medical science, called antivivisectionists) are opposed to all experiments on living animals, and that you utterly condemn the work of the Pasteur Institute, the Rockefeller Institute and allied laboratories. I have to thank the studies of such institutions for the fact that my wife is alive today. Kindly accept my resignation from the Vivisection Investigation League, to take effect immediately.

* * *

COLONEL DAVID S. WHITE, Chief Veterinarian of the American Expeditionary Forces: Anyone who is familiar with what vivisection has done for mankind and animal kind must realize its value to the world.

* * *

WILLIAM J. MAYO, M. D., The Mayo Clinic, Rochester, Minn.: My brother and I are strongly in favor of vivisection. In the clinic there are large laboratories in which a number of physicians are constantly at work on investigations which depend on animal experimentation.

* * *

PRESIDENT ANGELL of Yale University: We find no obstacle to the practice of animal experimentation in any intuitive moral convictions, nor in the traditional morality of our race.

ANTIVIVISECTION *

By CHESTER ROWELL, LL.D.
Berkeley

I

THE usual antivivisection bill has been introduced in the legislature, this time under the sponsorship (presumably "by request") of Senator Roy Fellom of San Francisco. It would, the dispatches say, "forbid universities, research laboratories and experimental stations from using animals for experiments or demonstrations of any kind."

This is the regular biennial attack, ostensibly on "cruelty," but actually on science. It has never passed the legislature and would be vetoed if it did. Even the periodic efforts to pass it by initiative have met with decisive defeat. Nevertheless, because the opponents of science are persistent, its defenders must be vigilant.

That the real opposition is to science rather than to "cruelty" is shown by the fact that these bills always authorize the infliction of pain on animals for other purposes, but prohibit scientific experiments even without pain. They all permit branding, dehorning, spaying and gelding on farms, without anesthetic, but forbid opening the vein of a mouse or a guinea pig in the laboratory, even under anesthesia. Most of them would prohibit feeding one rat on wheat and another on corn, to study the comparative processes of digestion. They permit the slaughtering of cattle for food and the poisoning of squirrels for protection, but they would forbid a pin-prick in a rabbit to measuse the dose of insulin to save a human life.

The "cruelty" part of the crusade is simply untrue. If the torture tales of current antivivisection pamphlets were correct, then every university president in the United States, every dean of every medical school and every doctor you personally know would be a liar. These are the men to whom we have entrusted the guidance of our youth and the safeguarding of our lives. If they were men who would solemnly lie to the world, on a matter of which they have personal knowledge and cannot be honestly mistaken, that would be worse than the "tortures" of which they are accused. Better close our colleges than have our sons and daughters corrupted by such men, and better die untreated than permit ourselves to be operated on by a surgeon who would lie about an operation on a dog. Instead, these are the very men whom we trust above all others.

The antiscience attack is the more insidious because fewer people are equipped to check its statements. The allegation is that animal experiments have added nothing to human knowledge, anyway. But careful reading will usually disclose that the real meaning is that there is no such knowledge to add to. It is impossible to deny that animal experiments discovered antitoxin and insulin, but it is possible to question whether these were worth discovering. Nobody who knows the facts, to be sure, does question it; but there are many who do not know the facts. It is possible to think that it is right to make soup of the flesh of slaughtered cattle, but wicked to make adrenalin of their glands. Absurd as it seems, some persons do think just that.

So let us get two things straight:

First, "vivisection" is not torture.

Very few laboratory experiments involve cutting, and these are done under an anesthetic, whenever it would be used in operations on human beings. This writer has had done to himself, with and without an anesthetic, practically every surgical thing that is done to animals in laboratories — the last one five minutes before this paragraph was written. And we have all inflicted on rats, to get rid of them, worse suffering than they ever undergo in laboratories.

Most laboratory experiments are medical, not surgical, and involve no more discomfort to the animals than the same diseases do to men. If one sick rabbit will save a thousand sick babies, is not that worth while?

And, second, the real opposition is to science. In a democracy men have that right. A man need not believe that quinin kills malaria or that vaccination prevents smallpox. He may even think that strychnin is not poison. But he must not, on that belief, administer it to others. Neither should he have the power, because he does not know that antitoxin cures diphtheria, to forbid the pin-pricks in horses and guinea pigs, required for production of antitoxin and the measurement of its dosage.

* Reprinted from the "World Comment" column of the San Francisco *Chronicle*, March 9, 1933.

The democratic right not to know the truth does not alter the fact that it is the truth. The laws of nature still operate, whether you "believe in" them or not. Nobody who recognizes the existence of medical knowledge doubts that animal experimentation has contributed enormously to it. To prohibit the use of animals in the Wassermann test for syphilis would be like prohibiting the use of the microscope in examining water for typhoid. Men do have syphilis and water does carry typhoid, even if there are those who choose not to believe it.

The fact is that medical research, mostly on animals, has already banished from the earth most of the plagues that once afflicted mankind and is on the way to control the others. Even George Washington and Louis XIV were pockmarked with smallpox. Now almost nobody has it. We no longer fear cholera, typhus, bubonic plague, or yellow fever. Malaria is under control; diphtheria preventable and curable; typhoid fever possible only by neglect; and most of the other contagious diseases dwindling. Tuberculosis is understood and has become a minor factor in the death rate. Influenza is still a mystery and cancer baffles us. Some thousands of white mice are now being used in investigations to unlock its secret. Shall we make this pursuit of knowledge a crime?

* * *

II*

This is more about "vivisection."

Senator Roy Fellom and numerous others write to explain that a bill recently criticized in this column is not against vivisection generally, but merely forbids the sale of condemned dogs from the pound for that purpose. The information that the bill was general came from an Associated Press dispatch from Sacramento, and the arugments then made are still good against such a bill and the perennial agitation for it. Only a part of them would apply to this separate dog pound bill. They do hold, however, against the motives of most of its supporters, whose letters show that their real opposition is to vivisection generally. They are interested in this bill as a first step.

For the dog pound bill separately, if it were separate—as it is in the minds of a few, but not of most of its advocates—there are arguments which, though not conclusive, are sincere and practical. But even these would have no force if it were not for the lurid fictions circulated by the antivivisectionists. If people knew what happens to dogs in laboratories, the humane work of the pounds in taking up stray, disabled and unwanted dogs would not be hampered by the figment of their possible "torture." It is no worse for a dog to be chloroformed in the laboratory than to be cyanided in the pound. Either fate is a mercy to the only dogs on which it is imposed. And even to meet this point no law is necessary, since any pound which finds itself handicapped by it can meet it by a rule of its own.

It cannot be too much emphasized that the first question of this whole issue is one of fact. If the things described in the antivivisection pamphlets do happen, they ought to be stopped. If the men who, of their own knowledge, say that they do not happen are liars they ought to be ejected in disgrace from their present positions in charge of the education of the youth of the country and the training of those who are to guard its health. The scientific aspects of the problem may be arguable (though no scientist does argue them), but the question of fact is not. These things are or are not facts, and the charge that they are facts is capable of proof or disproof by evidence. Until there is agreement that these torture tales are or are not true there is no basis of fact on which to conduct the rest of the argument.

The evidence that they are not true comes from absolutely every person who has first-hand knowledge, and whose word would be taken as conclusive on any other subject. These are the men to whom we entrust our lives and the mental and moral integrity of our children. They are authorized by law to administer poisons, to cut up living human beings, and to determine upon what knowledge and precepts the coming generation shall enter responsible life. They attend us in birth and ease us in death, and are entrusted, all our lives, with a responsibility and a confidence which we would grant to few other men. On any other question their word would be unhesitatingly accepted. And they say, on their honor, and on personal observation, that these things are not true.

The evidence on the other side is nearly all unverified and second-hand, presented by those who do not personally know whether it is true or false. Try it out yourself. Ask whichever physician you personally know to be an honorable gentleman, whose word you would take on any other subject, what he has personally seen in laboratories. Ask any antivivisection circulator of pamphlets which of the things in that literature he or she has personally seen. The answer, of course, will be "None." Read the literature itself, not on its science or antiscience, but on its sheer allegations of fact. Eliminate outright any quotation which does not state from what book it is taken, giving page and date of publication. No quotation which omits these verificatory details is worthy of credence. Actual study of many such quotations shows that the words "under complete anesthesia" have been deliberately omitted from them. Where these data are given, look them up in the original book. You will be surprised.

Examining the evidence in this way, nine-tenths of it simply disappears. What is left?

A few things. Cutting in the brain is done without anesthetic, for the same reason as cutting hair or fingernails. Hypodermic injections and vein punctures are done without anesthetic, on animals as on humans, because they hurt less than the anesthetic itself. There are authentic accounts of horribly painful experiments, in the days when human surgery had also to be done without the then unknown mercy of anesthesia. And there are a very few investigations—so rare that most men who have spent their whole lives in laboratories have never seen them—that have to be conducted

* From the San Francisco *Chronicle*, March 24, 1933.

painfully, on conscious animals. Such pain is inflicted a million times on farms to once in laboratories, and can be done in no laboratory without the express permission (almost never asked or given) of the dean. And there is the direct testimony of a few discharged laboratory workers that the doctors are liars. Evidently somebody is. There is unanimous agreement that nearly all the experiments are medical and dietary; not surgical. The surgical ones are done under the same precautions as on humans.

These are questions of physical fact, capable of ascertainment. Until they are agreed on, there is nothing to discuss on the scientific or human side. Why argue whether it is useful or ethical to "torture" animals, unless in fact they are tortured?

149 Tamalpais.

SUBCUTANEOUS EMPHYSEMA WITH ASTHMA*

By H. D. Van Fleet, M.D.
H. Miller, M.D.
AND
A. J. Scott, M.D.
Los Angeles

Discussion *by J. J. Singer, M. D., Los Angeles; Hugh K. Berkley, M. D., Los Angeles.*

SUBCUTANEOUS emphysema with asthma is a rare condition. A careful search of the literature reveals only fifteen cases, to which we are now adding four, thus making a total of nineteen.

The mechanics of the production of subcutaneous emphysema are similar to those which may, at times, produce spontaneous pneumothorax. The sequence of events may be outlined as follows. An obstruction in a small bronchus or bronchiole, acting as a one-way valve, allows air to enter a part of the lung on inspiration, but hinders or blocks its normal escape on expiration. With the increase in volume and pressure of the trapped air the vesicles balloon, the intervening partitions rupture, allowing the vesicles to coalesce and thus form blebs or bullae. With the onset of violent coughing and respiration, as in a severe asthmatic attack, there are wide and rapid swings in the differential between pulmonary and intrapleural pressure, such that a bulla or bleb ruptures, and the air from the lung then escapes either into the pleural cavity to produce a spontaneous pneumothorax or, following the reflections of the pleura and pericardium or the perivascular tissues, invades the mediastinum (Kelman[1]). Spreading upward through the mediastinum, the subcutaneous tissues are invaded and subcutaneous emphysema occurs, extending upward to the neck, occasionally onto the cheeks, downward on the arms to the wrists, over the thorax, and even down on the abdomen to Poupart's ligament and beyond. Not all cases have the same distribution; some are more extensively involved than others. But the picture is characteristic and



Fig. 1, Case No. 1.—Note swelling right side of neck.

the crepitation of the skin typical. The individual looks swollen over the involved areas.

Joanides and Tsoulos[2] conclude from animal experiments, using the dog, that simple subcutaneous emphysema is harmless.

We report four cases whose symptoms are similar in all respects to the published cases.

REPORT OF CASES

Case 1.—Esther I., ten years old, was seen by Doctors Piness and Miller in October, 1924, with an attack of asthma which had persisted for the previous forty-eight hours.

Family History.—Father and maternal aunt had asthma.

Past History.—In infancy had eczema of arms and legs. The first attack occurred in the winter, and persisted throughout the year. The father owned horses, goats, and chickens, and the child was free of asthma when away from home.

Skin tests showed the patient to be sensitive to her mattress, and its removal was advised.

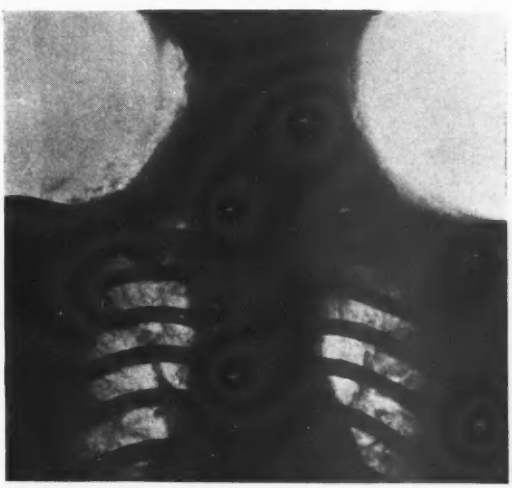


Fig. 2, Case No. 1.—Emphysema subcutaneous right side neck.

* The authors wish to thank Dr. Lewis Gunther for the privilege of reporting Case No. 3. They also wish to thank Dr. L. Visscher for assistance in translating the Dutch articles, and Dr. J. M. de los Reyes for assistance in translating the articles in Spanish.

TABLE 1.—*Tabulation of Reported Cases*

No.	Name of Author	Age	Sex	Asthma Since	Nationality
1	Watson	18 years	Female	Childhood	British
2	Calverley	17 years	Male	Childhood	British
3	Whitby	25 years	Male	Childhood	British
4	Kahn	6 years	Female	Past six years	U. S. A.
5	MacDermot	22 years	Male	Past six years	Canada
6	Scheltema	30 years	Male	First attack	Holland
7	Artagaveytia	18 years	Male	Childhood	Uruguay
8	Kruysveldt	22 years	Female	One year	Holland
9	Davidson	9 years	Female	Eight years	British
10	Pastorino	9 years	Female	Unknown	Uruguay
11	Pastorino	14 years	Male	Childhood	Uruguay
12	Sheldon & Robinson	16 years	Male	One year	U. S. A.
13	Kirsner	38 years	Male	Six days	U. S. A.
14	Dietrich	5 years	Female	Two and one-half years	U. S. A.
15	Dietrich	7½ years	Male	Five years	U. S. A.
16	Van Fleet, Miller & Scott	10 years	Female	Two and one-half years	U. S. A.
17	Van Fleet, Miller & Scott	5 years	Male	Three and one-half years	U. S. A.
18	Van Fleet, Miller & Scott	28 years	Male	Twenty-one years	U. S. A.
19	Van Fleet, Miller & Scott	19 years	Female	Two years	U. S. A.

In January, 1924, the patient came to the clinic with the history of freedom from asthma since disposing of her mattress, but that five weeks previously she had had a cough, pleuritic pain in the lower left chest, and fever. A physician diagnosed this as pneumonia, and the girl was in bed for two weeks.

Physical examination on the October visit presented dyspnea with asthmatic breath sounds, accompanied by sonorous and sibilant râles. There was slight cyanosis and the girl complained of some soreness in the throat. Her neck on the right side was markedly filled out, obliterating the bony landmarks from the angle of the jaw to below the clavicle. On palpating this region, crepitations were plainly evident and were confirmed by auscultation. The left side of the neck showed no crepitations, but with the stethoscope crepitations could be made out. X-ray examination showed subcutaneous emphysema of the neck in the region above described.

Diagnosis. — Bronchial asthma with subcutaneous emphysema. The girl made an uneventful recovery, and has been seen from time to time since, reporting in 1935 that she had been free of asthma.

* * *

CASE 2.—James W. was five years old when he entered the California Hospital on October 7, 1932, complaining of dyspnea. He had been suffering with an attack of asthma for about twenty-four hours.

Past History.—He was first seen in the out-patient department in June, 1931, when he was three and one-half years old. He was slightly underweight and short for his age. Physical examination was negative, except for injected gums and swollen tonsils. He was not seen again until the following October, when, on account of repeated attacks of asthma, he was given a series of allergy tests. These tests were negative. He was placed on elimination diets and apparently did well for some months, and gained in weight and height. He seemed better in every way when using a limited amount of wheat.

Family History.—The mother and maternal grandmother were asthmatic.

Examination.—When he entered the hospital, October, 1932, the patient was well developed and well nourished but very listless, with his eyes rolled up. There was marked dyspnea and cyanosis. Respirations were 65 and pulse 160 per minute, with a rectal temperature of 101.6 degrees Fahrenheit. The tonsils were large and red. On palpation there was subcutaneous emphysema from the neck down to the abdomen, most marked on the right side and extending to the right hip. There were no cardiac murmurs, and the breath sounds were tubular with many sonorous râles, especially over the upper left lung posteriorly.

On October 8, 1932, a roentgenogram showed the heart in normal position, the lungs clear and both diaphragms of normal curvature. There was air in the soft tissues outside of the chest wall on both sides of the neck, on both shoulders, and down to the right hip and thigh almost to the knee.

Laboratory Reports.—Throat culture and smears were negative for diphtheria. Urinalysis showed a trace of albumin and acetone, and, microscopically, no pathological elements.

Blood counts: Hemoglobin, 90 per cent; erythrocytes, 5,040,000; leukocytes, 10,500; polymorphonuclears, 75 per cent; red cells and platelets appeared normal on the smear. The following day the leukocytes were 6,300 and the hemoglobin 79 per cent.

Course. — There was no relief from ephedrin or epinephrin, which had been given prior to entrance to the hospital and while in the hospital. Hot medicated steam inhalations and free use of water and orange juice appeared to do good. There was a gradual subsidence of the symptoms, excepting for the emphysema, and the patient was discharged to his home on October 11, three days after entrance. At that time he had a normal temperature, pulse, and respirations.

On October 17, 1932, he was seen in the out-patient department, and his emphysema was entirely gone.

* * *

CASE 3.—Gilbert S., twenty-eight years old, was seen by Doctor Miller, in consultation with Dr. Lewis Gunther, at the Cedars of Lebanon Hospital on September 20, 1934, with the complaint of severe asthmatic attack of twenty-four hours' duration, unrelieved by usual therapy, and puffiness of the face and neck, with partial closure of the left eye.

Family History.—A brother and sister had asthma.

Past History.—Asthma started when about twenty-one years old and occurred several times a month, starting with nausea and vomiting. The patient was an upholsterer by trade.

Present History.—Doctor Gunther had seen this man at 9:30 a. m. and, getting no results from the use of epinephrin, had sent him into the hospital.

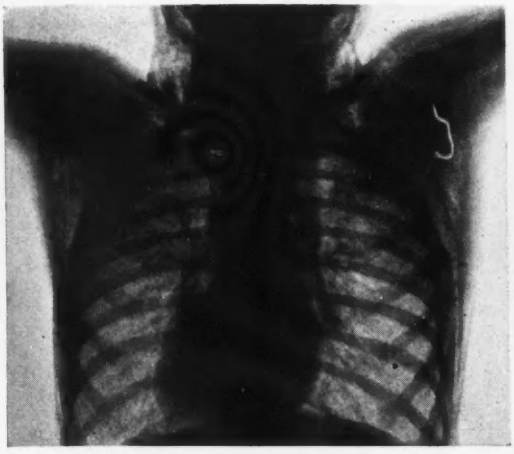


Fig. 3, Case No. 2.—Emphysema around neck and in axillae.

Physical Examination.—The heart was negative for murmurs, the bronchi filled with wheezing râles, and on inspection the face was puffy with partial closure of the left eye, the neck was swollen and on palpation there was crepitation, which was also present over the thorax to the lower costal margin. The rest of the physical examination was essentially negative. There were dyspnea and slight cyanosis.

Laboratory Reports.—Wassermann was negative, urinalysis showed some albumin and, microscopically, some hyalin and a few granular casts. Blood counts showed: hemoglobin, 95 per cent; erythrocytes, 5,230,000; leukocytes, 12,300; polymorphonuclears, 81 per cent; and the blood smear was normal.

Roentgenogram report: Hilus increased in size and density, subcutaneous emphysema in the neck, in the supra- and infraclavicular regions, and midaxillary regions bilaterally.

The temperature on entrance to the hospital was 100.4 degrees Fahrenheit, rising to 102 degrees Fahrenheit; but on discharge it was normal. Therapy was epinephrin and pituitrin in small doses, frequently repeated, and the use of sedatives as needed. On September 29 the patient was discharged from the hospital with only a moderate amount of subcutaneous emphysema. A second episode of subcutaneous emphysema, accompanying a violent asthmatic attack, occurring about one year later, is reported by Doctor Gunther.

* * *

CASE 4.—Mrs. E. K., nineteen years old, was first seen at her home the night of June 10, 1936. Her obstetrician had seen her this same day because she was "not feeling well and had a cold." She was about four months pregnant.

Past History.—The patient was healthy as an infant and young child until an attack of bronchopneumonia at the age of two years. Six weeks later she had her first attack of asthma, and from that time until she was fifteen years old she had frequent attacks. At fifteen she was studied and found sensitive to several foods, as well as house dust, cat hair and dander. She adhered strictly to the principles advocated by her physician, with good results, until September, 1935, when she became careless and had several minor attacks of asthma until December, 1935.

Family History.—No asthma.

Present History.—The patient had been feeling better than usual until June 8, 1936, when she changed her residence, moving into a house previously occupied by others. She spent the morning of the 8th and 9th cleaning and dusting. During the morning of the 8th she complained of a head cold, stating she could not breathe well through her nose, and there was a constant nasal discharge. The morning of the 10th she became wheezy, commented through the day on the return of the asthma and as night came on became dyspneic. She had no results from medication formerly successfully used. During the evening she had

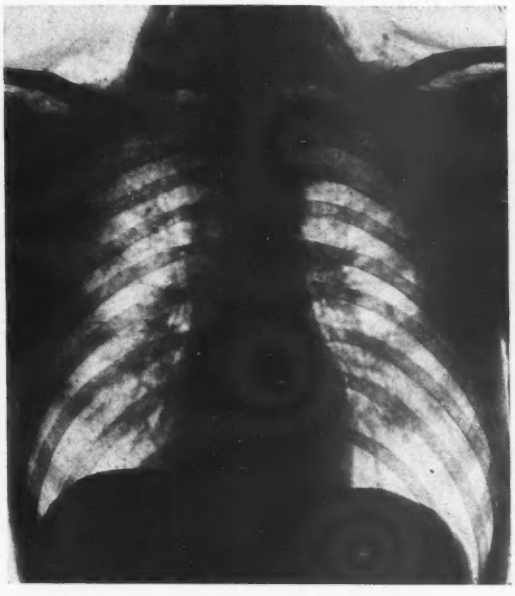


Fig. 4, Case No. 3.—Emphysema in supraclavicular regions, slightly in axillae.

to sit up in bed with her head resting on pillows in front of her. At 10:30 p. m., becoming panicky because of the dyspnea, she called for help.

Physical Examination.—On inspection the patient appeared to have a large goiter, this impression being created by the large collar-like swelling of the neck. The respiratory effort was most violent and the patient was very cyanotic. On palpating the skin of the neck, trunk and the upper extremities, it was found that all areas were crepitant from the jaws down to the lower part of the abdomen and down both arms to the wrists. Percussion revealed the entire lung area to be hyper-resonant. On auscultation the inspiratory effort was short but the expiratory effort was prolonged. There were no normal breath sounds, these being replaced by high-pitched musical râles. There was not much coughing. The heart rate was 132 per minute and regular. The blood pressure was normal and the temperature was 100.6 degrees Fahrenheit.

Course.—Hospitalization was advised but not accepted. By the use of epinephrin hydrochlorid, 1:100 in a nebulizer, the patient was considerably relieved. With amytal, four and one-half grains, repeated in one hour, plus the epinephrin solution spray every hour during the night, the patient got some sleep and felt more comfortable the next day. As she was not getting adequate care at home, she was moved to the hospital, June 12 to 14, and rapidly improved. On entrance to the hospital the temperature was 99.6 degrees Fahrenheit, and on discharge it was normal. Urinalysis was negative. Blood showed: leukocytes, 6,200; polymorphonuclears, 76.5 per cent. Eight days after the return home all evidence of the subcutaneous emphysema had disappeared. During the remainder of her pregnancy the patient was free of asthma and was delivered normally on December 1, 1936. She has been well ever since.

COMMENT

In the accompanying table the reported cases,[5] together with our own, have been briefly tabulated. There are a total of nineteen cases, of which ten were in foreign lands and nine in the United States. There were eleven males and eight females. The ages vary from five to thirty-eight years. Seven cases were under fifteen years of age, and twelve were over. Sheldon and Robinson,[3] Kirsner,[4] and Dietrich[6] give complete bibliographies, which have been carefully checked.

The etiology of the asthma in the reported cases was unknown in most instances; all authors commented on the cyanosis and dyspnea present in each case. The subcutaneous emphysema usually appeared after the individual had been suffering with a violent attack of bronchial asthma, lasting from several hours up to six days, as in Case 13 on the chart. In all reports the air was absorbed within ten days and there were no sequelae.

511 South Bonnie Brae.
672 South Westlake Avenue.
2310 Cimarron Street.

REFERENCES

1. Kelman, Sarah R.: Experimental Emphysema, Arch. Int. Med., 24:332 (Sept.), 1919.
2. Joannides, Minas, and Tsoulos, George D.: The Etiology of Interstitial and Mediastinal Emphysema, Arch. of Surg., Vol. 21, No. 2, p. 333 (Aug.), 1930.
3. Sheldon, John M., and Robinson, William D.: Subcutaneous Emphysema in Asthma, J. A. M. A., 107:1884 (Dec. 5), 1936.
4. Kirsner, J. B.: Subcutaneous Emphysema in Bronchial Asthma, J. A. M. A., 108:2020 (June 12), 1937.
5. Watson, F. S.: Emphysema of Cellular Tissue Due to Asthma, Brit. M. J., 2:699 (Oct.), 1885.
—Calverley, E. J. G.: Interstitial Emphysema Beneath the Deep Cervical Fascia as a Complication of Asthma, *Ibid.*, 2:1899 (Dec.), 1902.
—Whitby, C. J.: Subcutaneous Emphysema in a Case of Spasmodic Asthma, *Ibid.*, 1:73 (Jan.), 1905.
—Kahn, I. S.: Subcutaneous Emphysema in a Case of Bronchial Asthma, J. A. M. A., 88:1883 (June 11), 1927.
—MacDermot, H. E.: Subcutaneous Emphysema in Asthma, Canad. M. A. J., 21:708 (Dec.), 1929.
—Scheltema, M. W.: En geval van huidemphyseem door asthma, Geneesk. gids, 9:1076-1079 (Nov. 13), 1931.
—Artagaveytia, A., and Zanzi, L. A.: Enfisima subcutáneo en el curso de un acceso de asma, Rev. de tuberc. d. Uruguay, 2:428-445 (Nov. and Dec.), 1932.
—Kruysveldt, C. S.: En geval van uitgebreid huidemphyseem bij asthma bronchiale, Nederl, tijdschr. v. geneesk., 77:5380-5382 (Dec. 2), 1933.
—Davidson, F. C.: Subcutaneous Emphysema in a Case of Bronchial Asthma, Lancet, 1:1230 (June 9), 1934.
—Pastorino, A.: Asma y enfisema, asma y neumotorax, Rev. de tuberc. d. Uruguay, 4:256-259, 1934.
6. Dietrich, Harry F.: Subcutaneous Emphysema in Asthma, Calif. and West. Med., 47:329-331 (Nov.), 1937.

DISCUSSION

J. J. Singer, M. D. (2007 Wilshire Boulevard, Los Angeles).—The four cases of subcutaneous emphysema described by the authors indicate the anatomic pathway air takes when a rupture of pulmonary tissue occurs and no pneumothorax is present.

Ballon and Francis in *The Archives of Surgery*, December, 1929, Vol. 19, Part II, showed the course air may take in the production of mediastinal and subcutaneous emphysema. It may spread subfacially between the costal pleura and the intrathoracic fascia. A rupture of an emphysematous bleb, which is the usual cause of interstitial emphysema, may allow air to dissect at first interstitially and then to the hilum of the lung; thence into the mediastinum subfascially and over the entire body. The air may dissect along the trachea to the floor of the mouth—it may follow the sheaths which surround the larger blood vessels; the axillary and femoral vessels may be compressed. Occasionally it may extend retroperitoneally and outline the kidneys.

The symptom of dyspnea is to be expected if the mediastinum retains the air; a tamponade of the large vessels occurs, likewise pressure on the trachea.

The number of reported cases are few, but undoubtedly many minor cases occur which escape detection.

Unless the emphysema is producing alarming symptoms no treatment is indicated, but at times incisions in the subcutaneous tissue may permit a rapid elimination of the air.

Hugh K. Berkley, M.D. (1136 West Sixth Street, Los Angeles).—Subcutaneous emphysema as a complication of a severe asthmatic attack apparently is a rare condition. This seems amply confirmed by the author's review of the literature.

With full appreciation of the severity of the attacks in some cases of asthma, it is to be wondered that it does not more frequently occur. One is lead to suspect that more cases occur, but that they have passed unrecognized or perhaps have not been reported.

Similar attacks of subcutaneous emphysema occur in pneumonia, the mechanism of production being precisely the same as the mechanism described in asthma.

OBSTETRIC OBSERVATIONS*

ON SOME IDEAS AND PROCEDURES NOT COMMONLY FOUND IN THE TEXTBOOKS

By Benjamin Bakewell, M.D.
Santa Barbara

Discussion *by Donald G. Tollefson, M. D., Los Angeles; Frank W. Lynch, M. D., San Francisco; Edward N. Ewer, M. D., Oakland.*

IT is my purpose in presenting these notes to call attention to some observations I have made or experiences I have had in the care of patients over a period of many years which I have not found mentioned in the current textbooks. It happens to any observing physician that instances or conditions will arise in the course of his contacts with patients in which some minor or relatively unimportant experiences may provide him with an observation or procedure which he is able to use again to advantage in the treatment of his cases. I do not mean to suggest that these observations are necessarily original with me or have not been repeatedly noted by others under the same circumstances, but I do believe that since they have not found their way into the current records, they may be of sufficient value to make it worth while to record them.

As my interest during recent years has been mainly in the field of obstetrics, most of these observations are confined to this subject.

MECHANICS AND OBSTETRICS

I will open with the positive statement that a good obstetrician must be a good mechanic, and that study, training and experience, necessary as they are, do not make an obstetrician unless he has the aptitude to envision his problem with the eye and mind of the natural mechanic. We have all seen well-read and well-trained surgeons who can ably discuss pathology, diagnosis and treatment, yet who cannot operate with the same ability because they cannot learn to use their hands or a tool, and have no vision of the mechanical procedure involved. This is particularly true of the obstetrician. The delivery of the fetus through the birth canal is a complicated mechanical procedure; and where it is necessary to give artificial aid, this must be done by inducing from below the same mechanical maneuvers which must be pictured, step by step, in the mind and by the hand of the operator in order that there may be a successful conclusion.

How many times have we seen the doctor push on the forceps, drag out the baby, injure the fetal

* From the Santa Barbara Clinic, Santa Barbara.

skull, traumatize the birth canal, himself completely satisfied if the child breathes and the mother lives, and throughout the procedure wholly unconscious that he has not done a skillful and satisfactory delivery because he does not see the problem with the eye and mind of the natural mechanic. Let us say again that the good obstetrician must be a good mechanic.

BEHAVIOR COMPLEX

The significance of the behavior complex in diagnosis of the stage of labor:

The behavior of the patient during her pains may be used by the observer to indicate roughly the stage of labor. In the early period of labor the patient may complain vociferously, but it is significant that her facial expression remains placid. She smiles and is cheerful between her pains while complaining of their severity. However, as time goes on, with dilatation progressing and the fetus sinking lower and lower in the pelvis, her face loses its placidity and becomes distorted with suffering and, notably, she loses her smile. A smiling woman in labor is a woman in the early first stage, regardless of the evidence of nurses and interns. This is a rule that seldom proves false.

In my early years of home deliveries, before the days of rectal examinations, and where I did not feel too sure of my asepsis, I was wont to depend on the character of the pains and their effect on the behavior of the woman, aided by external examination to determine the stage of labor, and was seldom disappointed in my prognosis.

AMNESIA

It is impossible for a normally sensitive individual not to be swayed in his judgment by suffering, and by the importunities of a patient's family. Such influences frequently result in too early interference in labor, which is not justified by the condition of the patient. Many mothers are delivered instrumentally before complete dilatation of the cervix because of the cries and complaints of the laboring woman and the prayers of her family, "Do something, Doctor!"

One can withstand these importunities for a time, but gradually they wear you down. "All right, put her on the table and call the anesthetist." On go the forceps, and the cervix is widely torn; while your cooler judgment says, "Hands off!" for another hour at least. This exemplifies a very practical advantage of amnesia in labor. The patient, though sometimes restless during her pains, sleeps quietly between them and it is quite obvious even to her family that she is not more than semiconscious of her condition, and she and her family will be satisfied to wait the normal progress of the labor so that the accoucheur is permitted to use his judgment without distraction or coercion.

This is an observation that I have never seen mentioned elsewhere, but that must have been noted consciously or unconsciously by everyone who uses amnesia and should, I believe, be given its due importance in weighing the evidence for or against "twilight sleep."

DIAGNOSIS OF PRESENTATIONS

In making a diagnosis of presentation, one should observe the contour of the woman's abdomen. When the vertex is in the occiput posterior position there is frequently a definite dip or hollow in the otherwise smooth curve just above the pubes. This is not present in the normal anterior presentation. This hollow resembles closely the dip in contour just above a distended bladder, but it is lower on the abdomen. The condition is probably occasioned by the physical contour of the anterior surface of the fetus, with the brow flexed over the chest in contradistinction to the smooth contour of the posterior aspect, the curved spine, and the occiput.

The rectal examination made to determine the presence or absence of dilatation of the cervix is frequently a very unsatisfactory procedure. If the cervix is effaced—that is, flattened out to almost paper thinness—it may be quite impossible to feel its margin through the rectovaginal tissue, so that a determination of the degree of cervical dilatation by this means is impossible. In these cases one should note with the finger the feel of the sutures of the fetal skull. If they can readily be outlined, one is feeling through the open cervix. If they are obscured or absent to the finger, the cervix is interposed and, therefore, cannot be dilated. By passing the finger over the sutures, one can then determine, by noting when the sutures become obscured, the degree of dilatation. This maneuver should be kept in mind during every rectal examination, and will often clear up an otherwise difficult problem.

INDUCED LABOR

For one cause or another it is frequently necessary to induce labor. The accepted method is to administer certain oxytoxics, and at the calculated height of their activity to rupture the membranes. This procedure sounds quite simple, but when the vertex is high and the membranes are stretched over it with little or no intervening fluid, one may insert an instrument, attempt to rupture the membranes, withdraw the instrument, and if no fluid drips out of the vagina there is no certain evidence that the membranes actually are ruptured. This uncertainty may be promptly allayed by the following procedure: Insert the dressing forceps through the cervix, pressing the tip lightly against the presenting vertex. Open the forceps slightly, close and withdraw them. If the membranes have been ruptured, there will be found in the tip of the forceps a few little fine hairs from the scalp of the fetus. This definitely settles the question.

ON CUTTING THE CORD

It is commonly advised that immediately after the delivery of the child we should wait until the cord stops beating before severing it, with the belief that the child continues to receive blood from the placenta until this occurs. This seems to me to be an illogical conclusion. Before birth there is certainly sufficient blood in the fetus and placenta for both, and after delivery the body of the fetus continues to hold all the blood it needs while that in the placenta is superfluous for it. In fact, if it were passed into its body, which is doubtful, it would be immediately destroyed. It is my practice to cut the cord as soon as is convenient and I have not noted any harmful effects.

EPISIOTOMIES

In certain cases of spontaneous delivery in which the patient is receiving respiratory amnesia during her pains, it is thought wise to perform an episiotomy. Under ordinary circumstances this is too painful a procedure to attempt without full anesthesia. It may, however, be done as follows without the realization of the patient that anything is being done by her doctor. Place the open scissors over the site of the proposed episiotomy between her pains, then as the next pain reaches full intensity and the perineum distends, the partially anesthetized patient being thereby distracted, make a quick partial cut. Repeat this procedure during three or four pains, and the full episiotomy will be accomplished with the patient quite unaware that it has been done. Thus you avoid full anesthesia with delay from the cessation of her pains and at the same time her resentment at being subjected to a painful procedure.

MEASUREMENTS

To most people linear measurements are rather vague, especially when expressed in the metric system. How many of us can mark off centimeters with any degree of accuracy without a scale? This is the reason for the custom of measuring lesions by comparison to familiar objects, such as the lemon or walnut. It is not necessary to point out the absurdity of such a method of measurement. I have found that the average male hand, measured across the second joints of the fingers, is approximately eight centimeters in width, or two centimeters for each finger. This makes a convenient and fairly accurate scale quickly applied to any object, never left in your other suit of clothes, and one which may be used by the surgeon when scrubbed and operating. I have found this very useful.

The above suggestions and procedures are offered for what they are worth. They have all been used repeatedly and have proved valuable to me. Whether they are worth passing on to others, I leave to you.

1421 State Street.

DISCUSSION

DONALD G. TOLLEFSON, M.D. (511 South Bonnie Brae Street, Los Angeles).—These observations, based on a long clinical experience, are always worth recording, and Doctor Bakewell's essay should serve as a stimulus to others for similar reports. The obstetrician must not only be a good mechanic, but he must be thoroughly familiar with the mechanism of labor. Failure to appreciate what can be accomplished under the proper conduct of the first stage of labor will invariably and unnecessarily increase the operative incidence.

There is no longer any argument to prevent the judicious use of analgesia in labor. Being able to assure the patient that the most of her labor will be erased from her memory makes for a more normal antipartum period. It also prevents, to a large degree, the nervous reaction following delivery.

The diagnosis of presentation by abdominal, as well as rectal and vaginal examination, has too often been neglected. The diagnosis of occiput posterior position is one of the most common findings by consultants in prolonged labors. Labors in such instances will be longer, but if recognized early their management will not be difficult. One point concerning the prognosis of labor in malpresentation or position is the accessibility of the cervical opening to the examining finger. Whenever it is eccentrically placed, laterally, or deeply posterior, progress will be slow. This observation also suggests some abnormality of presentation, position, flexion, or extension.

We have long been taught that the cord should not be cut until after pulsations have ceased; and yet it has been quite definitely shown that the increase of blood in the fetus is not affected by severing the blood supply of the fetus. It does seem, however, that after the patient delivers, if the gas anesthetic is discontinued some benefit may be derived by the administration of oxygen while the cord is still pulsating.

*

FRANK W. LYNCH, M.D. (University of California Medical School, San Francisco).—Doctor Bakewell gives us much philosophy in his paper as well as a number of suggestions of value to the great mass of physicians practicing obstetrics. One can readily see that Doctor Bakewell learned these lessons from experience, and not from his teachers in the Medical School, or from any of the many textbooks which doubtless he has kept adding to his library these many years. The paper shows that the author has been a keen observer. While he does not say so, I have no doubt but that he learned in the school of hard knocks each point he discusses so well—probably while driving home and thinking over every detail of some case which had not gone so well as he hoped it would. Hindsight is a great teacher if we develop it properly. We all remember that Oliver Wendell Holmes said he always made his best speeches in his two-wheeled chaise while driving home from the dinner.

The practice of obstetrics, even more than nearly any other branch of medicine, compels its students to think logically and quickly from signs and findings. If the findings prove incorrect, the showdown comes usually so quickly and dramatically that the obstetrician cannot dodge responsibility for error. In most fields of surgery, days, weeks, or even months, elapse between treatment and the final result. Then, if the treatment was incorrect, Time has greatly softened the blow to the physician's ego; there has been sufficient time for him to forget his errors. There is no rude shock as the responsibility is thrust into his lap with a dull thud and sickening sound, as occurs when an obstetric case goes wrong—unless by chance you are a dull yokel who, as Doctor Bakewell says, feels completely satisfied if the child breathes and the mother lives after a forceps delivery in which the fetal skull is injured, and the birth canal very badly traumatized. There is no hope for that type of physician, yet there are many of them; they practice by virtue of license by the State Board of Medical Examiners; and do everything in medicine they wish to do—even as you and I.

Several times yearly I read in journals articles by physicians commending certain "knacks" as details in treatment which they have worked out for themselves, probably because most physicians have been, by necessity, self-taught in the practice of medicine. Doctor Bakewell has worked out points of great value; yet, like many other things in life, they are not likely to prove of greatest value to those who need them most: the beginner in obstetrics who needs them most will not know enough to recognize their great value. Yet ignorance of obstetric art does not prevent the beginner from accepting the care of obstetric cases, even though he has seen very few such in his medical school and hospital work: moreover, he may entertain only a dislike for the subject. Many physicians accept obstetric cases because they are the first work that comes to them, knowing that they may be the nucleus of a large and lucrative practice if the women are normal and deliver spontaneously in L. O. A. Naturally, they feel that they should give the patient some form of twilight sleep: they have no conception of the complications that may ensue from heavy medications during labor.

It is useless to say that medical schools should compel each student before graduation to have at least enough practical experience in obstetrics to warrant his undertaking the care of a normal case. Few agree as to how many cases that should be. Personally, I feel there should be at least seventy-five cases, yet most of the "State Board" require only twelve to fifteen. However that may be, the fact remains that medical schools in this country never will have funds sufficient to teach adequately any of the apprentice courses in medicine. Of the many nations rated as civilized, only Sweden gives such courses. Each student graduating in that country is compelled to obtain sufficient experience in obstetrics, not only to handle the ordinary

obstetric case, but also to treat properly a great many complicated cases. The effect of such treatment is reflected in its national maternal mortality.

The State Boards for Medical Licensure hold the key to the situation. The inadequate clinical prerequisites for obtaining the legal right to practice can be modified if the profession ever wakens to realize that the present methods are all wrong. Those who would shrink from undertaking such a herculean task may be stimulated a bit by the thought that if our country inaugurates state medicine it will do so because the nation has at last realized that the maternal mortality of the United States is very much greater than it has any right to be.

*

EDWARD N. EWER, M. D. (411 Thirtieth Street, Oakland).—I agree with Doctor Bakewell that the behavior of the patient is important in the diagnosis of the stage of labor. I have known delivery-room supervisors who could give more valuable information to the absent obstetrician after studying the character of a few pains than they could after making a rectal examination.

If untoward events of the labor necessitate exact checking of position and stage, a thorough vaginal examination is imperative. It can be accomplished with a high degree of asepsis, and is reliable in contrast to the guesswork of rectals.

About cutting the cord, I think it is now done immediately more often than twenty-five years ago. Waiting till pulsations stop, serves no useful purpose. Cutting it at once and allowing the placental end to bleed in the absence of another baby, is thought to hasten placental separation. Also the baby can be cared for without delay.

And this brings up for criticism the present-day practice of the initial cleansing of the baby. If scrubbed with soap and water, its rectal temperature will often drop two degrees centigrade. If wrapped up warmly and not bathed, the vernix will be absorbed in twelve to eighteen hours, the skin will be smooth and satiny, and the incidence of jaundice will be reduced to one per cent.

The vernix is not a filth product. It is a better ointment than can be compounded in a drug store. What possible good can vegetable and mineral oils do? Vernix is probably absorbed by the infant in utero, and if present at birth its cholesterin and other ingredients are still of value. I began this plan, sponsored by Keiffer of Brussels, on my service in the Alameda County Hospital ten years ago; eight thousand infants have now been so treated in this institution, and there has been a minimal occurrence of skin irritations and rashes.

In spite of Hippocrates' aphorism, "Life is short and the art long; the occasion fleeting; *experience* fallacious, and *judgment* difficult," we can on occasion turn with profit from the deluge of statistics the present medical literature vogue and listen to the opinions of those, like Doctor Bakewell, who have behind them painstaking years of thoughtful observation.

ADRENAL CORTEX IN TREATING CHILDHOOD ASTHMA: CLINICAL EVALUATION OF ITS USE*

By F. M. POTTENGER, JR., M.D.
AND
F. M. POTTENGER, M.D.
Monrovia

DISCUSSION *by E. Kost Shelton, M. D., Los Angeles; Leland Hunnicutt, M. D., Pasadena.*

WHEN one faces a therapeutic problem he is inclined to try to find a single approach to its solution. Inasmuch as vital processes are complex, a single measure rarely accomplishes the end in view. Insulin simplifies the control of the diabetic, but it is far from commanding the full confidence of the physician in treating diabetes. Epinephrin has long been used in the treatment of asthmatic paroxysms, but we now find that crude extract of the adrenal cortex is an important adjunct in restoring the physiologic balance of the allergic patient. The acquiring of a comprehensive understanding of asthma has probably been delayed because we have had our minds too narrowly directed to its allergic nature. Because asthma is accepted as an allergic disease, it is natural to assume that its cause is some allergen. This thought has dominated the minds of medical men almost to the exclusion of all other ideas. The fact that the patient's general physiology might be an important part in the etiology of asthmatic symptomatology has not been sufficiently emphasized.

RECENT TREATMENT OF ASTHMA

For two decades the principal treatment of asthma has consisted of treating paroxysms with epinephrin, and attempting to desensitize the patient to specific allergens; of withdrawing the offending allergens; or of removing the patient from the environment in which the allergens are found.

A great deal of progress has been made by following this line of therapy. Many patients have been freed from their distressing paroxysms, and not a small percentage have procured a more or less permanent relief.

ASTHMATIC SYNDROME

The asthmatic syndrome is one of vegetative dysfunction. All allergies in their final analysis are due to cells whose physiologic balance is disturbed, which means that their permeability is altered. This in turn means that their function is more readily stimulated than normal.

Sensitization of cells in case of allergies may be caused by protein gaining access to the tissue, and requiring cellular digestion. Body cells are normally endowed with a power to digest proteins and accomplish it by producing antibodies, which are fixed to the cells and react with more or less violence when the same foreign protein again finds its way into the tissues. When once this function has become established it may remain for a long period of time, and may be very active when the allergens to which the cells form antibodies contact them, or when stimulated by other forces. It is probable that cells digest much protein without developing a pathologic degree of sensitization. We infer this from the fact that protein is known to enter the tissues without causing symptoms. Parenteral digestions as a normal function of cells may be more active in protecting the body than is realized. This suggests that the relief of pathologic allergies might be brought about physiologically by substances which will reduce the permeability of the affected cells.

Allergies are relieved by increasing the antagonistic effects of the sympathetic nervous system in such conditions as asthma and hay fever, either by central stimulation or by using the sympathetico-tropic hormone from the adrenal gland; by lowering parasympathetic action by the use of atropin; by lowering the potassium intake and increasing

* Read before the General Medicine Section of the California Medical Association, at the sixty-seventh annual session, Pasadena, May 9–12, 1938.

the calcium; by the administration of acids or ammonium chlorid; by starvation or the use of foods, which tend to decrease the alkaline balance. Such measures lessen the activity of the hypersensitive cells.

AUTHORS' ANALYSIS

Our discussion today will be limited to an analysis of a group of fifty allergic cripples complaining of asthma who have been under treatment for one year or longer. Though many have obtained relief in a shorter period of time, we have purposely chosen this group of severe refractory cases in whom we have carried out a program of prolonged treatment which has gradually evolved during the past six years. Each new feature of the treatment has been added after careful consideration, and we now attempt to explain the measures used, and to assign to them their due importance.

INITIAL METHOD

As previously reported,[1] we started our treatment of asthma with the whole adrenal gland and found it to be more effective than epinephrin alone, and most effective when given with a high salt intake. Our second step was the addition of a hydrophilic colloid diet[2] with an acid ash residue, high in mineral and high in vitamins. The third step was the addition of a series of exercises. In evaluating the various measures used, the adrenal hormones have exerted the most favorable influence on results; next, the diet; and then, finally, the exercises. The adrenal hormones form the basis of the regimen. Fineman[3] reported treating a series of four cases using a purified adrenal cortex preparation. His results were not encouraging. Wilmer and Miller[4] reported a series of seventy-two cases using the adrenal cortex. More recently Prickman and Koelschi[5] have made a similar report. Barbour[6] reported the use of dried adrenal material and thyroid, with favorable results in children. Todd[7] has made extensive anatomical studies of the allergic cripple, showing the marked variation in the anatomical structures of allergic children from those who are considered normal.

RATIONALE OF THE TREATMENT

The rationale of the treatment as we use it was previously described by us.[1] Though we referred but briefly to the dietary regimen in our previous discussion, we now utilize a semiketogenic diet which, on the basis of an adult diet, consists of approximately 2,300 calories, roughly 145 grams fat, 145 grams protein, and 100 grams carbohydrate. It is rich in known vitamins and minerals. The two main meals are built around a large, raw salad and a portion of meat consisting of not less than four ounces when cooked. Sugar and all foods high in carbohydrates except whole grain, fresh ground cereals are largely eliminated. Gelatin is used, one-half ounce or more at each meal, because of its hydrophilic colloidal properties which aid in digestion and mineral assimilation. The vitamins, other than those contained in the large green salad, are administered in the form of a high grade raw green pasture milk, and malt and cod liver oil. The use of the vitamin B complex is particularly stressed in those children showing large colons. Minerals are obtained from the milk and vegetables. Mineral concentrates are only occasionally used in the most severe cases of deficiency.

POSTURE

Nearly all of these children have poor posture, which is either a result of developmental failure or the secondary reaction to their disinclination to exercise. We attempt to correct this by the use of appropriate exercises. We specifically attempt to secure diaphragmatic breathing. Our exercises are graded from a method of simply controlling breathing to as strenuous physical exertion as the child can bear when he becomes stronger. One must always remember that overexertion is a definite menace to these asthmatic children. Athletic coaches often attempt to push them too fast, and they may undo much that the clinician, through patience and perseverance, has accomplished over a prolonged period of time.

INDIVIDUALIZATION IN TREATMENT

The complete therapy used in any individual case depends upon the physical findings in those patients. Though all the children and adults discussed in this paper have come to us primarily for the purpose of obtaining relief from their asthmatic paroxysms, we have, by studying each patient, tried to find in what manner he differs from normal physiologic standards. This we felt was a much better approach than a simple attack upon their allergic symptomatology. Although the allergy may be the most distressing symptom, we feel that as one understands the deviations from the normal, both in physical development and physiological response, he can more properly evaluate the therapy which is to be used.

As one watches and studies the changes which take place in growth and development, he usually finds that the fundamental physiological processes are also altered. These processes and the allergic symptoms seem to respond coincidently.

It is not the purpose of this paper to evaluate the deviations from normal that the allergic individuals show, but we do desire to mention some of the more obvious changes and to discuss the effect that the therapeutic regimen which we have instituted has had on certain prominent physical characteristics.

DATES OF ONSETS OF ASTHMA

The onset of asthma in the fifty patients reported here occurred in nine during the first year of life, nine during the second year, sixteen during the third, six during the fourth year, four during the fifth year, one during the sixth year, one during the eighth year, one during the ninth year and one at the age of 61; two were unknown.

If, however, from the standpoint of the patient's history, the first indication of allergy, such as difficulty with digestion, eczema or hay fever is considered, these figures change to twenty-three during the first year, seven during the second year, twelve during the third year, three during the fourth year, one during the fifth year, one during

TABLE 1.—*Summary of Findings of Fifty Cases of Asthma Under Treatment One Year or More*

Patient's Number	Age of Onset of Allergic Symptoms	Age of Onset of Asthma	Length of Time Breast-fed	Mother's Thyroid or Genital Disturbance	General Physical Improvement			Allergic Improvement			Beginning Treatment					Last Examination					Complications
					Marked	Fair	Poor	Marked	Fair	Poor	Chloride	Hemoglobin	Red Count	White Count	Eosinophiles	Chloride	Hemoglobin	Red Count	White Count	Eosinophiles	
C-10939	6 wks.	3 yrs.	4 mos.	Thy.	x				x		406		5.1M	7,300	7.5	461	99	5.0M	8,100	7.5	
C-10916		4 yrs.	8 mos.	G. D.	x			x			492	90	4.5M	6,700	12		104	5.0M	9,000	8.5	
C-10909	2 mos.	2 mos.	1 mo.		x				x			84	4.5M	9,400	13.5	461	90	4.6M	6,800	11.5	Pos. Tuberculin
C-10902	6 wks.	5 yrs.	mos.	Thy.	x				x		487	92	4.8M	9,700	11	450	98	4.6M	9,500	11	
C-10483	2½ yrs.	2½ yrs.	8 wks.		x				x			89	4.5M	11,300	24.4	445	89	4.5M	17,300	13.5	Severe Bronchiectasis P. T.
C-10449	10 mos.	1 yr.	None	Thy.	x				x			64	4.4M	10,700	12.5		78	4.9M	8,000	7.5	
C-10440	1½ yrs.	1½ yrs.	None			x		x				84	4.2M	11,200	4.5		80	4.4M	8,400	9	Pos. Tuberculin
C-10434	3 yrs.	3 yrs.		Thy.	x			x				97	5.0M	14,800	1	475	82	4.2M	5,400	12.5	
C-10398	3 yrs.	3 yrs.	5 mos.	Thy.		x				x		66	3.4M	8,000	8.5	387	86	4.4M	6,900	13	Bronchiectasis
C-10270	3 yrs.	3 yrs.				x		x				96	4.5M	7,900	5						Bronchiectasis
C-10860	3 mos.	2 yrs.	3 mos.	Thy.	x			x			454	106	5.0M	13,200	3	437	90	4.8M	7,800	4	Pos. Tuberculin
C-10864	20 mos.	4 yrs.	3 mos.	Thy.	x					x	450	76	4.7M	4,800	9		87	4.4M	6,000	2	Pos. Tuberculin
C-10804	6 mos.	3 yrs.	1 mo.	Thy. G. D.			x			x	387	81	4.7M	7,000	10	458	84	4.9M	7,400	8	Bronchiectasis; Pos. Tbc.
C-10793	5 yrs.	5 yrs.	9 mos.		x			x			461	100	5.2M	10,000	.5						Pos. Tbc.
C-10772	4 yrs.	4 yrs.	4 mos.	Thy.			x			x	479	85	4.9M	5,700	12						Undescended testes
C-10771	28 mos.	8 yrs.	4 mos.	Thy.			x		x		437	79	4.7M	11,000	5						
C-10767	6 wks.	1½ yrs.	2 wks.	Genital		x				x	458	90	4.6M	7,600	25.5	479	99	4.9M	12,000	12	Pos. Tbc.
C-10759	2¾ yrs.	2¾ yrs.	3 wks.	Thyroid		x		x			487	81	4.3M	9,000	4						
C-10844	2 yrs.	2 yrs.	3 mos.	Genital		x			x			77	4.0M	6,800	16	479	86	4.5M	6,300	7	Bronchiectasis
C-10889	6 yrs.	6 yrs.	None			x			x			77	4.0M	6,800	16	479	86			7	
C-10159						x			x			72	5.2M	17,400	6.8	461	90	4.7M	10,800	12	Bron.
C-10927					x			x			458	106	5.8M	8,200	5	461	999	4.2M	13,700	7	Pos. Tbc.
C-10633	2½ yrs.	2½ yrs.	3 mos.	Genital	x				x		461	77	4.2M	13,700	10		89	4.6M	9,200	6.5	Undescended testes
C-10731	2 yrs.	2 yrs.	8½ mos.	Thy.		x			x			81	4.2M	8,500	5	479	99	4.5M	7,200	5.5	
C-10722	1 mo.	5 yrs.	None	Thyroid		x		x			370	93	4.4M	9,400	3.5	466	87	4.7M		5.6	Pos. Tbc.
C-10712	9 mos.	5 yrs.	5 mos.	Genital		x			x		479	86	3.6M	7,600	3.5	416	86	4.4M		6	Bronchiectasis
C-10706	3 yrs.	3 yrs.	None	Thyroid		x			x			88	4.4M	5,600	4		76	4.1M	7,000	8.5	
C-10708	5 mos.	9 yrs.	5 mos.	Thyroid		x			x		466	90	4.6M	10,000	6.5		90	4.4M	7,700	6	Undescended testes
C-10697	1 yr.	1 yr.	3 mos.	Thy.		x			x			94	4.5M	9,800	5.5						Positive Tuberculin
C-10682	3 wks.	2 mos.	None	Thy.	x				x		433	79	4.0M	13,900	6	441	86	4.5M	8,700	8	
C-10670	Life	1 yr.	1 mo.	Thy.		x				x		89	4.5M	15,000	6		84	4.4M	9,600	6.5	Undescended testes P. Tbc.
C-10667	3 mos.	3 mos.	None	Genital	x				x			89	4.5M	15,000	6		93	4.8M	13,800	7.7	Bronchiectasis
C-10663	3 yrs.	3 yrs.	6 wks.		x			x			466	97	4.7M	8,700	14	466	102	4.6M	11,700	8	Pos. Tbc.
C-10664	Life	2 yrs.	7 mos.	Thy.	x				x		466	94	4.9M	13,200	27	451	100	5.2M	18,400	21	Pos. Tbc.
C-10640	2½ yr.	3 yrs.	3 mos.			x			x			88	4.3M	12,700	10	458	100	5.2M	15,000	6	
C-10631	1 yr.	3½ yr.	None	Thy.		x			x		475	90	4.9M	5,400	10		100	5.0M	10,800	3	
C-10608	2 mos.	2 mos.	7 mos.	Thy.		x			x			73	3.9M	12,600	13		75	4.4M	16,200	4	
C-10620	4 mos.	4 mos.	6 wks.	Thy. G. D.		x			x		466	95	4.9M	9,000	10	458	89	4.4M	8,400	8.5	
C-10550	Life	3 yrs.	None	Thy.		x			x		450	98	4.8M	11,100	5.5	450	95	4.6M	11,700	33	Pos. Tbc.
C-10537	Life	6 mos.	1 mo.	Thy.	x			x				77	4.2M	10,200	.5		86	4.7M	9,600	1	
C-10533	8 wks.	2½ yrs.	3 mos.	Thy.	x			x			471	85	4.2M	17,300	15	483	83	4.4M	7,300	8.5	
C-10516	2½ yrs.	2½ yrs.	None		x				x		483	86	4.6M	10,000	8	483	87	4.4M	5,200	7	
C-10505	3 yrs.	3 yrs.	3 mos.	Thy.	x			x				103	4.4M	17,000	13.5		90	4.4M	8,900	7	
C-10503	3 wks.	3 wks.			x					x	445	110	6.3M	27,000	10						Bronchiectasis
C-10531	4 yrs.	4 yrs.	1 mo.	Genital			x			x	492	86	4.8M	5,600	15.5	461	90	4.5M	8,300	14.5	
10594	2 yrs.	3 yrs.	1 mo.	Thy.	x				x		441	89	4.4M	6,900	14.5	461	100	4.9M	8,100	7.5	
C-10797	2 yrs.	2 yrs.	None	Thy.			x		x			94	4.7M	9,900	4.5	466	101	5.2M	8,200	7	Bronchiectasis Un. Testes
C-10656	2 mos.	1 yr.	None		x				x			84	4.2M	7,700	7.5	479	79	4.3M	11,300	15.8	Pos. Tbc. Un. Testes
C-10958	19 mos.	19 mos.	None			x			x		461	93	5.0M	10,100	18	445	100	5.2M	10,400	9.5	Bronchitis; Emphys.
10442	61 yrs.	61 yrs.			x			x			458	99	4.8M	12,100	10	483	79	4.1M	8,500	4	

the sixth year, one during the sixty-first year and three were unknown.

When the matter of breast feeding is considered, one patient was breast-fed for nine months, four for six months, fifteen for three months, fourteen for less than three months, and eleven not at all; five were unknown.

The intensity of the asthmatic symptoms seemed to be greater in the children who showed feeding difficulties. A comparatively accurate history of disturbance of thyroid (may this be partly vitamin B complex deficiency?) was obtained in the mothers of twenty-eight of this group, and nine reported disturbances of the generative system, without evidence of primary thyroid dysfunction. The history of seven mothers was unknown. Of this group thirty-seven mothers, or 74 per cent, gave a definite history of these disturbances.

OTHER FACTORS

Of the asthmatic group, ten showed some degree of bronchiectasis, and eighteen out of forty-five patients tested were positive to tuberculin. Three of these have become negative under treatment.

Six of the thirty-five boys in this group showed delayed descent of the testes, while the tendency of the remaining under the age of puberty was to present external genitalia smaller than normal.

The blood chlorids varied from 370 to 492 in twenty-eight cases. On first examination twenty-eight patients showed an average of 458.3, while at the end of treatment they showed an average of 458.6.

The hemoglobins of the group averaged 88.1 at the beginning of treatment, and 90.1 at the last examination. The red blood counts averaged 4,578,000 at the beginning of treatment and 4,619,047 at the last examination. The white blood count averaged 10,390 at the beginning of treatment and 9,478 at the end of treatment. The eosinophilic count averaged 9.5 at the beginning of treatment and 9.02 per cent at the last examination.

As a group at the beginning of treatment, muscular development of thirty-eight patients was poor, five was fair, and seven was good.

On the basis of the weight[12] for the height of forty-three of this group, twenty-one were above normal and twenty-two below normal. Of these patients forty were taller than standard, one not obtained, six shorter than standard and three normal. Full cognizance has been taken of the fact that children in California are, as a group, taller than children of other parts of the country.

MUSCULAR DEVELOPMENT

When muscular development, physical endurance and weight changes are considered in reference to normal development, twenty-four patients showed marked improvement, twenty-one showed moderate improvement, and five showed no improvement. When one considers the patients' condition during treatment, fourteen had no allergic paroxysms, thirty had paroxysms of less intensity and incidence, and eight had only temporary relief.

The patients constituting this group were under active treatment with adrenal cortex therapy for a period of one year or more, using daily doses of 1½ to 10 grams of raw gland equivalent three times a day with meals, depending upon the age and condition of the patient.

TREATMENT PROCEDURES

Inasmuch as such prolonged treatment cannot be carried out hypodermically, particularly in children in whom a psychical condition is a serious complicating factor, we have used the oral method. The adrenal extract we use is known to contain active cortin which has been shown to be effective by mouth by Grollman,[8] Hartman,[9] Britton,[10] and associates. Likewise there are probably other fractions of equal importance in this crude extract, made according to the method first described by Swingle and Pfiffner and modified by us, and described in a previous report.[11]

The fifty patients under discussion today have all been refractory to other methods of treatment, and this consequently means that the coöperation of the patient is difficult to obtain in some instances. Of the five patients in whom we feel that the results were unsatisfactory, our records indicate that coöperation was difficult to obtain. This is based on historical evidence of continuous overdoing, and inasmuch as we supply all the medication, we have the records of its consumption which gives us a further index of coöperation.

The factor of greatest importance in the results obtained seemed to be the coöperation. The severity of the disease seemed to relate particularly to the time of breast feeding or the type of formula used in early infancy. The response of the children of this group to therapy and subsequent attacks during the year mentioned was apparently related somewhat to the degree of bronchitis. Whether or not they had a positive tuberculin did not seem to exert any appreciable influence on the improvement of the asthma in the children.

On the other hand, recurrent attacks during treatment seemed to have a definite relationship to the degree of bronchiectasis. Alteration of the normal sexual development of the girls was inferred from their physical development, but could not be measured as in the boys. Our experience would indicate that not only in the younger boys, but the older ones as well, there is a definite evidence of sexual imbalance. This is partly brought out by the fact that these children on the whole were taller than normal standards for their age, while their weight for their height was approximately normal.

LABORATORY FINDINGS

From the standpoint of the clinical laboratory, little evidence of change is noted in the figures as presented. The general average of blood chlorides is almost identical. The hemoglobins are very close and likewise the total red counts. The eosinophilic count remains constant. There is a tendency for the white blood count to diminish. On the other hand, at the end of a three months' period we usually find that there is a very marked reduction in the hemoglobin and red count in many

of these patients, which climbs back to original levels at the end of a year.

When one considers the physical development of these individuals, based upon their ability to perform muscular exercises, their endurance and tissue tone, improvement was shown in all but five cases.

COMMENT

When one considers the allergic cripple from the standpoint of his physiology and development, one is confronted with a symptom complex differing with each child. A thorough understanding of this symptom complex offers an intelligent basis for the application of therapy. In all of our work we have used a crude extract of the adrenal cortex because experimental and clinical evidence shows it to be a physiologic stimulant which is an important adjunct in the treatment of the symptom complex.

This method of approach, we feel, offers a hope that the allergic cripple may be gradually rehabilitated.

SUMMARY

1. A crude extract of the adrenal cortex, in conjunction with epinephrin given orally, is an important adjunct in the treatment of asthma.

2. A summary of fifty cases of refractory asthma treated over a period of one year or more showed improvement in their allergic symptomatology in 84 per cent. Physical improvement in the same group was noted in 90 per cent.

3. The routine hematology and study of the blood chlorids apparently give little information as to the progress of the patient.

4. Six of the thirty-five boys in this group presented nondescent of one or both testes, all six of which showed descent under treatment.

5. Evidence of thyroid or genital disturbance was obtained in 74 per cent of the mothers of the patients.

6. Some forty of the fifty patients were taller than normal standards.

Box A.

REFERENCES

1. Pottenger, F. M., Jr., R. T., and F. M.: California and West. Med., Vol. 43, No. 1 (July), 1935.
2. Pottenger, F. M., Jr.: Am. J. Digest Dis. & Nutrition, Vol. 5, No. 2, pp. 96-99 (April), 1938.
3. Fineman, A. H.: J. Allergy, 4:182, 1933.
4. Wilmer, H. B., and Miller, M. M.: J. Allergy, 8:77 (Nov.), 1936.
5. Prickman, L. E., and Koelschi, G. A.: J. Allergy, 9:158 (Jan.), 1938.
6. Barbour, O.: Arch. Pediat., B-203 (March), 1936.
7. Todd, W.: J. Allergy, 9:234 (March), 1938.
8. Grollman, A., and Firor, W. M.: Bull. Johns Hopkins Hosp., 57:281, 1935.
9. Hartman, F. A., Thorn, G. W., and Durant, R. R.: Endocrinology, Vol. 21, No. 5, p. 516, 1937.
10. Britton, S. W., Flippin, J. C., and Silvette, H.: Am. J. Physiol., 99:44; 1931.
11. Swingle, W. W., and Pfiffner, J. J.: Am. J. Physiol., 96:164, 1931.
12. Engelbach, William: Endocrine Medicine, Thomas, Vol. 1, 1932.

DISCUSSION

E. Kost Shelton, M. D. (921 Westwood Boulevard, Los Angeles).—The chief point of interest in Doctor Pottenger's paper lies, I believe, not so much in his rationalization of the allergic problem involved or what he professes to have accomplished by a new therapeutic approach, as in the approach itself.

Anyone interested in physiologic medicine cannot help being struck by the numerous disorders of unsolved etiology or those attributed to that obscure realm of somatic iniquity called constitutionality. Therefore, any rational approach directed toward elucidation of the problem of allergy in general, and asthma in particular, should not be ignored.

For a number of years certain findings in common between the allergic child and the non-allergic, but physically inferior child have attracted my interest. Others, too, particularly Todd, have pointed out the retarded physical development as shown by the roentgenogram in many allergic children. This could be explained in numerous instances by the sometimes necessarily inadequate diets. On the other hand, many children, who never even heard of an elimination diet, still present the findings common to an absorptive or an endocrine disorder.

In my ignorance, during the past ten years, not a few of such children were treated by the physiologic approach—namely, with thyroid, with adrenal cortex, with minerals, with vitamins or with preparations designed to enhance gastric absorption. In general, the results were not spectacular; but some of the children did get prompt and lasting relief from their allergic symptoms, particularly those where the thyroid factor appeared to be real instead of apparent.

While my experiences with adrenal cortex preparation in such conditions have been meager and the least satisfactory of any, I have never had the advantage of a fresh and unlimited supply of material that Doctor Pottenger enjoyed. Therefore, I am in no position to judge of its efficacy. My chief criticism of his work, and that which makes it so difficult to evaluate it, lies in the fact that he used diets and exercises and other hygienic measures concomitantly; any one or all of which things may have been good for the patient, but, when given together, they are not conducive to a scientific conclusion. Why should the mothers of 74 per cent of these children have thyroid or genital (menstrual?) disturbance? Why are 80 per cent taller than the average normal? Why should they all have had poor posture? What was the sex incidence? What was the maturation correlation with the chronological age? What part, after all, did the adrenal cortex per se have in the rehabilitation of these children, if they are actually rehabilitated? There is probably something very informative in these findings, but I fail to find the answer in Doctor Pottenger's paper.

❋

Leland Hunnicutt, M. D. (98 North Madison Avenue, Pasadena).—The problem of maintaining proper elimination and water balance in the mucous membrane system is a challenge to all of us. Doctor Pottenger has done some unusual and well thought-out work. The more I see of his patients, the more I am convinced that the problem does not have a single answer, but many answers. He includes a very complete régime in the care of allergic individuals.

So that we may better understand the difficulty that is presented to the nose and throat man, let us look at the mucous membrane of the nose and bronchi in both the normal and the allergic individual. The first slide shows the normal turbinate with its fine eliminative mechanism of cilia, goblet cells and mucous glands. The allergic turbinate no longer has cilia, has many goblet cells and a stratified squamous epithelium. There is a marked increase in leucocytes of an eosinophilic type in an edamatous tissue. It may also be noted that there is an increase in the number of mucous and serous glands. The normal mucous membrane of the bronchial tubes has a thin ciliated epithelium and a few goblet cells. There are occasional nests of glands, and only a few cells in the sub-epithelial connective tissue. The allergic or asthmatic bronchus shows much material in the lumen, the epithelium is hyperplastic, many goblet cells are present, glands are hyperplastic, there is an increase in fluid content, and there is a marked cellular infiltration. It can now be seen that we have a problem of correcting a very abnormal tissue. If it were possible to prevent the chronic changes which you have seen, then we would not only have a symptomatic cure but a return to normal histology as well.

I wish to describe one case from the several dozen that I have sent to Doctor Pottenger for this régime outlined by him. This case is that of a boy eight years old, who has had allergic symptoms since he was about three years of age. The clinical history was that of being sensitive to certain foods which, upon their removal, would give benefit for about one month, when the congested nose and sneezing would return. At the age of 6½ years, Doctor Pottenger put him on a régime such as he has described, and at about the end of two months all of the symptoms had disappeared, to reappear only on rare occasions. There has been a general improvement in health and nervous make-up, corresponding to the freedom from impairment of nasal breathing at night. Examination of the nose now shows normal turbinates and an adequate space. The pharynx, which had previously been granular, is now smooth. This case is quite representative of those I have observed under this type of treatment.

The control of the water balance in the tissue is the all-important thing in mucous membrane allergy.

Treatment must be started early in the course of the disease, because if not, there will be permanent inflammatory changes.

A DYNAMIC APPROACH TO PULMONARY TUBERCULOSIS*†

By HAROLD GUYON TRIMBLE, M.D.
Oakland
AND
BUFORD H. WARDRIP, M.D.
San Jose

DISCUSSION *by Carl R. Howson, M. D., Los Angeles; Sidney J. Shipman, M. D., San Francisco; Chesley Bush, M. D., Livermore.*

THE physician interested in pulmonary tuberculosis today has a much more definite approach to the problem of diagnosis, and a much wider scope with regard to treatment than was the case some years ago. This is particularly evident to anyone who can recall physical conditions in sanatoria of fifteen years ago, and their methods of handling patients with tuberculosis, compared with the equipment and technique of the modern tuberculosis institution today. The old, almost boarding-house type of care, has been replaced by something akin to, but not just the same as a modern hospital environment. This growth has been very gradual and has been necessitated by the increased technical demands made upon the physician, as well as the institution, by the present-day approach toward problems of diseases of the chest. We will try very briefly to trace these developments and to outline our methods of applying them. This does not attempt to be an exhaustive presentation, but is merely an approach from the clinical side to the practical problems that arise during the course of everyday work.

DIAGNOSIS

It was only some twenty years ago that most chest men of experience felt that everything to be learned about a chest could be gleaned from physical examination, together with routine clinical laboratory tests. It was felt that the use of the x-ray had but a small rôle in working out chest problems. The use of tuberculin at that time was believed by some pediatricians to have a limited scope in diagnosing tuberculosis in children, but carried little weight after infancy.

How different is the picture today! While there is still much confusion in some minds as to the value of tuberculin testing, in many places physicians are routinely testing their patients and following up positive reactions with some form of x-ray examination of the chest. In many hands the routine use of the fluoroscope to sort out those who have significant clinical lesions is quite satisfactory. Others depend upon x-ray films. The matter of availability and expense is important, but in our hands practically all of the early cases of pulmonary tuberculosis that we see are found through the routine examination of contacts by means of testing their skin reaction to an adequate dose of a proper tuberculin, and following the positive reactors by chest fluoroscopy.

The limitation of physical examination is well brought out in the following table,[1] which gives the findings in a study of 1,367 consecutive unselected cases of tuberculosis admitted to the Trudeau Sanatorium:

	Per Cent
Tubercle bacilli	61.5
X-ray	99.0 +
Hemoptysis	33.5
Râles	68.5
Pleurisy	12.0

Most of these cases were advanced when first seen at the Sanatorium. Analyzing this table it will be seen that, even in these advanced cases, by means of physical examination alone in the hands of experts, only seven out of ten could be diagnosed; in other words, three out of ten would be missed as cases of pulmonary tuberculosis by using the stethoscope alone. This is essentially the experience of anyone who has carefully checked his physical examination by x-ray. By examination of their sputum alone, six out of ten cases could be diagnosed as having tuberculosis. Chest men who realize these limitations will not give a diagnosis of "no pulmonary pathology" without some form of adequate x-ray examination.

Furthermore, while a sputum examination will in six out of ten cases reveal the presence of tuberculosis, it does not tell what the patient's problem is in any sense of the word, because the reaction of the patient to his infection, the localization and extent of the tuberculosis, the type of lesion (whether exudative or fibrotic), and particularly whether or no cavitation is present, are very essential in outlining treatment.

TREATMENT

The education of the patient is extremely important and little can be accomplished without it. For this reason we insist that at least six weeks be spent under proper sanatorium conditions.

We hope that nothing in this presentation will be interpreted as minimizing the value of absolute general rest in the treatment of pulmonary tuberculosis. By this we mean absolute rest in bed, the patient never touching his feet to the ground. This is usually supplemented, if the lesion is unilateral, by postural rest, using boards under the mattress

---

* From the Lung Service, Alameda County Hospitals, Oakland, and Alum Rock Sanatorium, San Jose.
Read before the General Medicine Section of the California Medical Association at the sixty-sixth annual session, Del Monte, May 2–6, 1937.

† Because of lack of space, Reports of Cases will appear in the reprints.

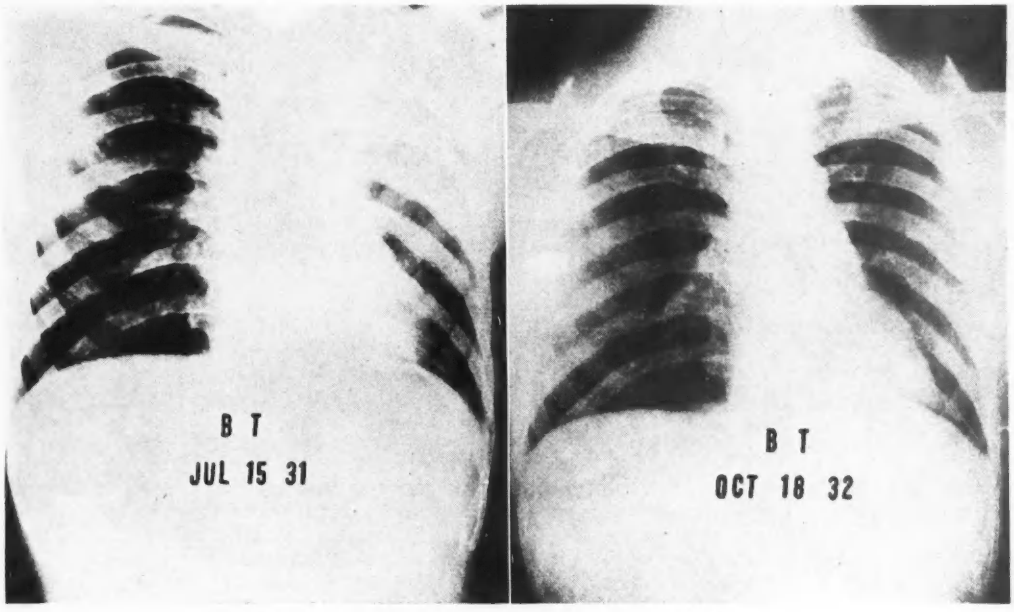


Fig. 1—Case 1.—Resolution of Pulmonary Tuberculosis by bed rest alone.

and with the patient lying twenty-three hours a day, at least, on a bolster on the involved side. This type of treatment may be sufficient for relatively early lesions of an exudative type. As a routine, we believe that this should usually be tried for a period of two months to see if the tuberculosis pathology can be influenced in the direction of resolution. We might at this point state that, in our approach toward this problem, we are not thinking in terms of symptoms as much as formerly, but more in terms of pathology. In other words, we frequently tell patients it is not so important how they feel—we are more interested in how they really are. What we are trying to emphasize to the patient is that merely because they have no fever, no cough, no sputum, does not necessarily mean that their problem, with regard to tuberculosis, is solved. The mechanical problem of the disease must always be taken into consideration. This brings us to the question of cavitation.

The statement of Bacmeister,[2] in 1925, that "of those patients who by x-ray show a cavity at least as large as a cherry, only 20 per cent were alive at the end of five years under any kind of treatment, unless during that time their cavity had been closed," has been found to be perfectly true. Other series,[3, 4] with different types of patients, show a 90 to 95 per cent mortality. A recent study by Wu and T'ang [5] on contralateral bronchial infection in pulmonary tuberculosis shows "in almost 90 per cent of instances a cavity existed in the primarily affected lung." We, therefore, know that the attempt to close a cavity in a patient with pulmonary tuberculosis must definitely be made, and it is for this reason that the various collapse procedures now described are important.

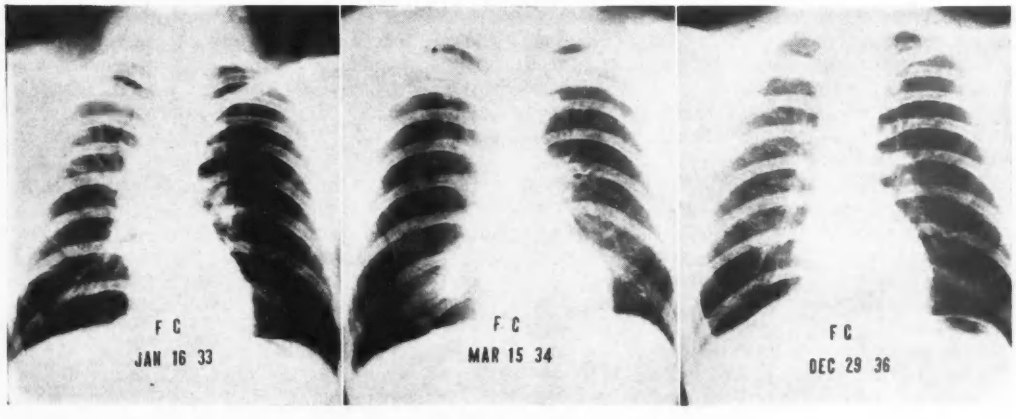


Fig. 2—Case 2.—Right artificial pneumothorax.

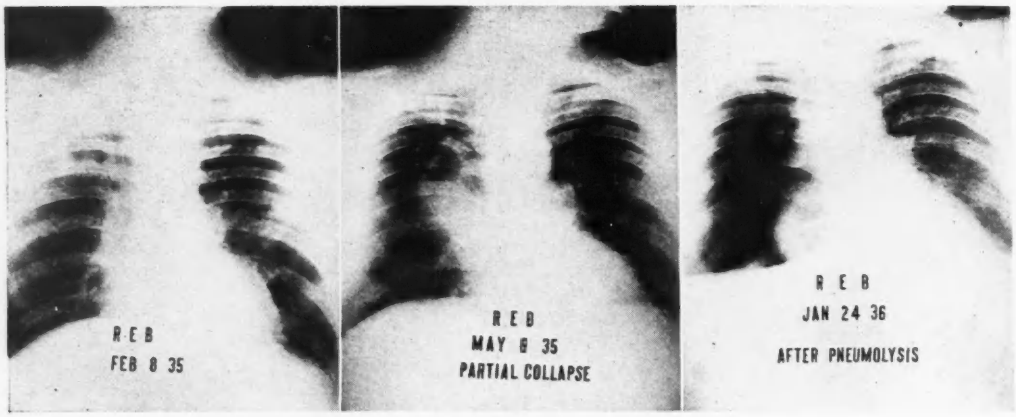


Fig. 3—Case 4.—Intrapleural pneumolysis.

Pneumothorax.—In medical practice in general, it is true that the simplest procedure effective is always the most practical and receives the widest use. This is certainly true in collapse therapy, and no other procedure should be attempted until artificial pneumothorax has been tried. There is no practical way of telling whether or no a cavity in a lung can be collapsed by the introduction of air into the pleural space until this has been actually tried, and all further collapse procedures are predicated upon the failure of an adequate collapse from pneumothorax alone. Pneumothorax is a comparatively simple procedure in the proper hands and, when accompanied by adequate fluoroscopic control, is very effective. The various tuberculosis sanatoria throughout the United States have some 75 per cent of their patients under collapse therapy, most of these receiving pneumothorax as the initial procedure.

Complications in pneumothorax are few but important. First, air embolus, the prevention of which is largely a matter of technique; second, pleural effusion, the incidence of which is high during the course of an artificial pneumothorax, but which in general plays no important rôle; third, in a small residue of cases, difficulty in expanding the lung after one feels an adequate collapse has been maintained for a sufficient period of time.

We measure the time at which the collapse becomes adequate from the closure of the cavity, as shown by x-ray plus disappearance of tubercle bacilli from the sputum, together with normal temperature and satisfactory body condition. We feel that most patients should be kept under adequate pneumothorax collapse for a period of not less than two and one-half years. In certain types of basal lesions and thick-walled, fibrotic apical cavities, or in some persons with nervous systems fundamentally inadequate which prevents their following reasonably closely a proper hygienic régime, the time of maintaining their pneumothorax should be extended.

Simultaneous bilateral pneumothorax is a perfectly feasible and proper procedure, and will usually account for from 7 to 10 per cent of all cases of pneumothorax. Where there is free pleural space, the continuance of this type of bilateral pneumothorax is not particularly difficult after it once becomes properly established. These patients may even return to a normal routine of life, still maintaining their bilateral pneumothorax.

Intrapleural Pneumolysis.—Jacobeus, who first popularized and made practical the cutting of adhesions which were preventing adequate collapse in pneumothorax, and the modification of this procedure by Unvericht and its early development by the Matsons of Portland, have contributed in a large measure to collapse therapy. In about one pneumothorax patient out of twenty, in our hands, does the attempt to cut these adhesions through the thoracoscope become necessary to establish adequate collapse of a cavity. This is a procedure without great risk, which gives excellent results under proper conditions, and which many times is of tremendous help.

Phrenic Nerve Operations. — In those cases where, because of adhesions, no adequate pleural space in which to establish an artificial pneumothorax can be found, the second simplest method of collapse, particularly in basal lesions, though it also applies to others, is an operation upon the phrenic nerve. Whereas formerly this nerve was isolated and evulsed, our present-day practice is to interrupt the nerve function by crushing. This gives a paralysis of the hemidiaphragm, lasting on the average of six months, and can be repeated several times if necessary. While the lung collapse obtained by this measure is very inadequate compared with that obtained by a good artificial pneumothorax, still it may be sufficient to solve the problem at hand and, if this is the case, nothing could be more effective. Collapse from phrenic nerve paralysis not being as adequate as that from an artificial pneumothorax, the patient is kept at absolute bed rest for a longer period of time. In contrast to bilateral pneumothorax, bilateral phrenic interruption seems hardly advisable on account of the marked dyspnea which usually ensues.

Pneumoperitoneum.—Since 1934 we [6] have been introducing air into the peritoneal cavity for the purpose of splinting the lungs. While this indirect compression is not as effective as pneumothorax, it seems to have a very definite place in those patients where the more hazardous surgical collapse

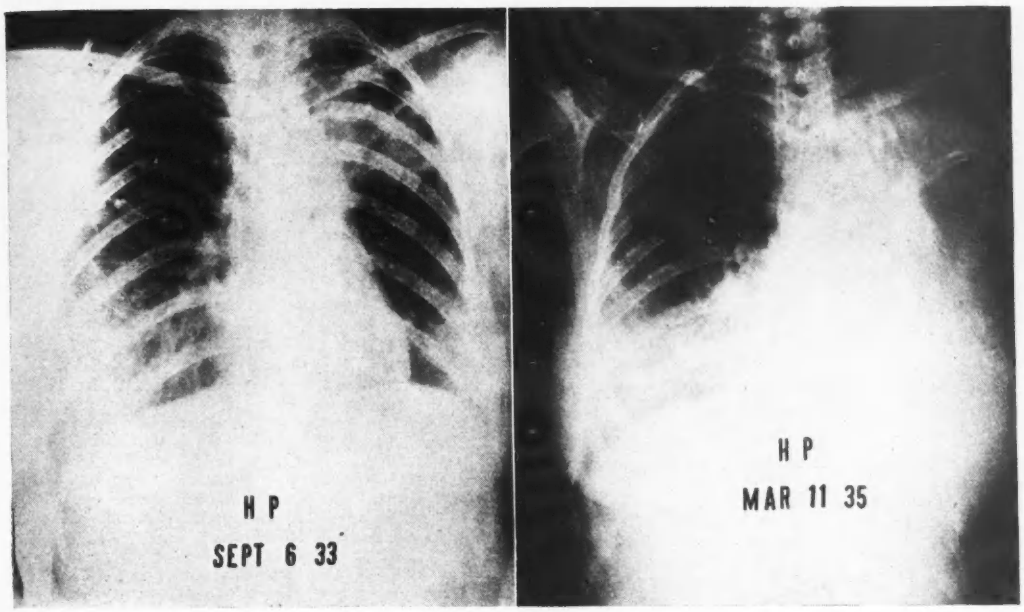


Fig. 4—Case 6. Thoracoplasty.

procedures are contraindicated by virtue of the exudative character or extent of the lesion, and the condition of the patient. While results are in no way spectacular, pneumoperitoneum seems to have found for itself in our work a definite place where no other collapse method applies, and may in itself be all that is necessary to provide the desired result. It may change an extensive bilateral exudative tuberculosis, with or without cavitation, into a simpler problem that is amenable to what may be called the more orthodox methods of collapse.

Pneumoperitoneum also supplements the rise of the diaphragm obtained by interruption of the phrenic nerve, and in general one can obtain twice the amount of collapse from a pneumoperitoneum, combined with a phrenic interruption, as can be obtained from either method alone. The hazards of pneumoperitoneum are even less than those of pneumothorax, and the complications we have seen so far in more than 4,000 refills on 140 different patients are not of such magnitude as to in any way preclude its use when indicated.

Apicolysis With Wax Plombage.—We agree entirely with Alexander [7] in the use of apicolysis with wax plombage. There is a definite group of comparatively small fibrotic cavities situated within the circle of the first rib, usually posteriorly, in patients who, because of their age and general condition, do not warrant thoracoplasty, in which this procedure is effective in closing and maintaining the closure of the cavity. We believe that bad results in some hands in the past have been because of poor selection of cases for plombage with lesions that were too exudative in type, or attempting to close cavities that were too large, or too low in the chest. When properly used, strictly according to indications, it has the virtue of giving adequate cavity closure and of being a comparatively simple procedure with very little attendant shock or discomfort to the patient.

Thoracoplasty.—While thoracoplasty is a much more formidable procedure, if we agree with Bacmeister's statement (which we believe to be correct), one has no choice but to institute this if the other measures described either have failed to close the cavity or for some reason are not indicated. We expect from thoracoplasty [8] roughly one-third of patients well, one-third no change, one-third worse. There are many series of cases that show an improvement on this figure, but by and large the average series agrees rather closely with these figures. Operative mortality has been reduced to about 10 per cent, and more recently (instead of the extensive procedures that were done sometimes in one, and latterly in two stages), by dividing the operation into multiple stages, removing two or, at the most, three ribs at a time with complete removal of the first rib and the transverse processes in the neighborhood of the cavity, effective results are steadily improving. The most recent presentation by Overholt [9] of Boston, with a dissection of the fascial bands that anchor the apex of the lung, is very appealing, and when lung surgeons in general master this technique, results should improve.

The increased use of the bronchoscope in studying thoracoplasty cases preoperatively,[10] and in recognizing by this means those who have involvement of the trachea and bronchi with ulcerative tuberculous lesions (which is a comparatively new and recent concept in clinical tuberculosis), will somewhat narrow our indications for thoracoplasty and, on the other hand, improve greatly our effective results.

There are many possibilities for combinations of these various procedures, which in any indi-

vidual case may be more effective than any one of them used alone. Many such combinations are in routine use, but going into this in detail would lead us too far afield at the present time.

Certain collapse procedures that at one time were in vogue, such as multiple intercostal neurectomy and section of the scaleni muscles, we mention in passing as not having been effective, at least in the hands of our surgeons, and we believe, in most places, have been abandoned as an effective method of pulmonary collapse.

SUMMARY

We can see, then, from this brief review that the practitioner of medicine who, in his office, uses upon his patients almost routinely the simple intradermal tuberculin test and follows through the positive reactors with some form of x-ray (either fluoroscopy or x-ray plates) will have the satisfaction of diagnosing many cases of active clinical pulmonary tuberculosis long before they are obvious by virtue of symptoms and well before there are any physical signs.

The diagnosis having been made, further procedures will then be determined by the type of lesion found, its extent in the lung, and the reaction on the patient, as well as the mechanics of the lesion; that is, its location and whether or no cavitation is present. The education of the patient is extremely important, and little can be accomplished without it. For this reason we insist that at least six weeks be spent under proper sanatorium conditions. But while there is no substitute for the proper hygienic training of the patient with pulmonary tuberculosis, this type of care alone, in at least 75 per cent of cases, does not seem to be adequate; in other words, unless the cavities present are closed, one cannot expect better than 20 per cent of patients to remain well over a period of five years. With adequate collapse procedures these figures can be practically reversed. The study of the mechanics in the chest is, therefore, imperative.

As time goes by, we have more definite indications for the use of the collapse procedures described above, and increased experience has widened the scope of their effective use. The knowledge we have regarding these methods must be definitely and promptly applied in order that our patients may not only remain well themselves, but so that they may not be a menace to their families and community by spreading their infection to those who otherwise would remain well.

CONCLUSION*

We have the definite means of diagnosing pulmonary tuberculosis early and accurately. The diagnosis having been made, there is much that one can do in the way of treatment for which, in most instances, we have definite indications and in which results can be definitely evaluated. From the standpoint of the patient, this means a more direct dynamic approach to his problem.

707 Latham Square Building, Oakland.
235 E. Santa Clara Street, San Jose.

* The authors would like to express their appreciation to Dr. Chesly H. Bush for his always helpful advice, and to Doctors Charles A. Dukes, Sumner Everingham and Paul Samson, the surgeons who have put these ideas into practical effect, as well as the many members of the hospital Resident Staff.

REFERENCES

1. Sampson, H., and Brown, Lawrason: Roentgenologic Examination in Pulmonary Tuberculosis, Am. J. Roentgenol., Vol. 25, No. 2 (Feb.), 1931.
2. Bacmeister, A.: Cavities in Tuberculosis, Verhandl. d. Deutsch. Gesellsch. f. inn. Med., 1925.
3. Barnes, H. L., and Barnes, L. R. P.: Duration of Life in Phthisis with Cavity, Am. Rev. Tuberc., 18:412, 424 (Oct.), 1928.
4. Simpson, S. E.: Cavities in Pulmonary Tuberculosis, Am. Rev. Tuberc., 31:658 (June), 1935.
5. Wu, C., and T'ang, B. H. V.: Contralateral Bronchial Infection in Pulmonary Tuberculosis—Study of Two Hundred Forty-Two Cases, Am. J. Roentgenol., 37:180 (Feb.), 1937.
6. Trimble, Harold G., and Wardrip, Buford H.: Pneumoperitoneum in Treatment of Pulmonary Tuberculosis, Am. Rev. Tuberc., 36:111-118 (July), 1937.
7. McIndoe, R. B., and Alexander, John: Extrapleural Paraffin Pneumolysis for Phthisis, Am. Rev. Tuberc., 29:270 (March), 1934.
8. Hedblom, Carl A.: The Results of Surgical Treatment of Pulmonary Tuberculosis, Am. Rev. Tuberc., 32:1 (July), 1935.
9. Overholt, Richard H.: Thoracoplasty with Lung Mobilization, Am. Rev. Tuberc., 35:411 (April), 1937.
10. Samson, Paul C.: Tuberculous Tracheobronchitis. Am. Rev. Tuberc., 34:671 (Nov.), 1936.

DISCUSSION

CARL R. HOWSON, M. D. (701 Merritt Building, Los Angeles).—Doctor Trimble has very clearly and succinctly set forth the present status of the diagnosis and treatment of pulmonary tuberculosis.

Successful treatment depends on the physician's ability to think in terms of pathology, as Doctor Trimble well says. The sad experience of many patients who have been permitted activity as soon as their fever, cough, and expectoration disappeared has clearly shown the necessity of planning in accordance with pathology. When the inflammation has subsided to the degree that the patient is symptom-free while at rest, the condition of the lesion is comparable to that of a fracture when the swelling and pain have disappeared. The essential reparative process is the formation of fibroid tissue in the former instance, and osseous tissue in the latter. Until sufficient time has elapsed for these tissues to become firm enough to stand the strain resulting from activity, any such stress jeopardizes the entire situation. In tuberculous lesions this is usually a matter of months.

I am glad to note Doctor Trimble's recommendation for a reasonable trial of conservative measures before attempting collapse therapy. There is no doubt that strict enforcement of a rest regimen will accomplish the desired results in quite a high percentage of cases. When satisfactory progress in this direction is not made in a period of one to two months, one should not hesitate to have recourse to pneumothorax. This procedure has enabled us to restore to health a most gratifying proportion of our patients who would otherwise be doomed to an early death. Even simultaneous bilateral pneumothorax is now carried on with reasonable ease, and not infrequently patients pursue a normal life at full-time work while the bilateral collapse is maintained. Doctor Trimble's work with pneumoperitoneum is deserving of high commendation. He has done much to popularize a procedure which gives promise of being a major advance in treatment.

The future of the tuberculosis situation hinges largely on the problem of early diagnosis. The x-ray is the cornerstone of any program along this line. The fluoroscope is of great value in the detection of these early lesions, particularly under conditions which make it possible for the fluoroscopist to examine a large group at one time, thus being able to have his eyes thoroughly accommodated to the conditions of the fluoroscopic room. In ordinary work, however, where only one patient is examined at a time, the examiner usually has not the time to prepare his eyes as completely as is desirable. However, even under the most favorable conditions some of the early infiltrations are not visualized, and under the conditions just outlined infiltrations of moderate size are frequently missed. For this reason, the only satisfactory and safe method in clinical work is the securing of technically good films. If this is

done in every case in which there is any justification for an examination of the chest, many more early cases will be detected and our therapeutic results correspondingly improved.

❋

SIDNEY J. SHIPMAN, M.D. (490 Post Street, San Francisco).—In pointing out the chief differences between the concept of tuberculosis diagnosis and therapy of fifteen years ago and the concept of today, Doctor Trimble has rendered a distinct service. The wider use of tuberculin in the late 'teens and early adult life is undoubtedly justified at present, since it is becoming increasingly valuable, due to the diminishing incidence of tuberculous infection. As Doctor Trimble says, positive reactions deserve x-ray examinations for follow-up.

Trimble has also done well to emphasize the important points of bronchial tuberculosis, a common complication of pulmonary tuberculosis which has been unrecognized too often in the past. Fortunately, bronchial tuberculosis often manifests itself by certain physical signs and x-ray changes which can be recognized without special investigation. One must be on the alert for localized wheezing, areas of partial atelectasis, and the like.

Regarding the duration of compression by pneumothorax there may be some disagreement. Trimble states that two and one-half years is the minimum. Some other workers in this field prefer to be guided by the general condition of the patient at the time pneumothorax is abandoned, and by the extent of the lesion before pneumothorax was instituted, as well as by the type of work the patient intends to follow. In short, there are many factors which influence one in maintaining or discontinuing compression. I am doubtful about the advisability of making any hard-and-fast rule with regard to this point.

Doctor Trimble also remarks, apropos of pneumolysis, that it is "a procedure without great risk." The truth of this statement depends, of course, upon the operator. Unless one is very conservative, it is a procedure with, rather than without, great risk; for, when unwisely done, the resultant pleural effusions, thickened pleurae, and other complications bring about greater loss of function than would be suffered by the use of a well-chosen thoracoplasty.

Regarding thoracoplasty, Doctor Trimble is a little too conservative in the use of his statistics. Far better results are now obtained than are reflected in the one-third, one-third, one-third groups which he mentions, and it is likely that the results can be still further improved.

In the use of pneumoperitoneum, Doctor Trimble has been a pioneer, and too great credit cannot be given him for his excellent work in this field. He has impressed upon us the fact that a certain group of bilateral, apparently hopeless cases can be sufficiently improved by pneumoperitoneum so that they can stand other forms of therapy, and ultimately recover. This is no mean contribution to the therapy of pulmonary tuberculosis, and deserves much wider acceptance at the hands of those treating tuberculous patients than it has so far enjoyed.

❋

CHESLEY BUSH, M.D. (Arroyo Sanatorium, Livermore).—After all is said and done, the first defense in the widespread battle against tuberculosis is the medical profession. For this reason, every attempt should be made to bring tuberculosis to the attention of all physicians as frequently as possible. The possibility of tuberculosis should be ever in mind, and its presence eliminated as a routine.

Doctor Trimble brings out and emphasizes the remarkable change which has taken place in the field of tuberculosis. As infection with the tubercle bacillus diminishes, the importance of the tuberculin test increases as a diagnostic help. Improvement of the x-ray and the fluoroscopic screens enhances their importance. There was a time—not so long ago in the memory of many of us—when the finding of râles at an apex was considered early diagnosis. We know now the condition is usually the late manifestation of earlier trouble in the lung parenchyma below the clavicle. We go out now to find tuberculosis before symptoms are suspected, and before physical signs appear.

At the period in which we were seeking râles at an apex, we were treating tuberculosis as a problem of an individual. Now we are treating it as a problem of the family. The finding of one case in a family demands examination of the entire group. It is often difficult for the private physician to avoid the suggestion of commercialism in sending for the entire family, but he can use the assistance of a public health nurse to accomplish this if he appreciates the need. We also treat tuberculosis as a community problem; and more and more this phase is being emphasized.

The development of compression therapy and the forward progress of chest surgery have been astounding. Formerly the treatment of tuberculosis attracted the younger medical men very little. Now there is a waiting list of young men desiring to be chest surgeons. There is a tendency to repeat immediately in every clinic the daring performances of skilled surgeons working under the most ideal conditions. Too often this changes the "dynamic" system of approach to the "dynamite" system. There will be less of this, however, as definite indications and limitations are crystallized, due to longer experience, in chest surgery.

Let us not forget the emphasis made in this paper on bed rest and education. We must still regard tuberculosis as a general disease with focal manifestations; and bed rest is fundamental at the beginning. When an interne asks, "Why is nothing being done for this patient?" when the patient is in bed with good nursing care, we wonder if the pendulum has not swung to the full limit of its surgical arc. We find it necessary to instruct the interne to change his question, "Why is nothing being done, in addition?"

❋

H. G. TRIMBLE and B. H. WARDRIP (closing).—We wish to thank the discussants for emphasizing and extending many of the points in the original paper.

It has been our observation that when two or more chest men of experience collaborate on the problem of any one individual patient, there is usually very little difference of opinion as to the proper method of approach, and which, if any, of the many procedures above outlined are to be used in the individual instance.

This means, of course, that as these procedures develop, each finds its true place, and definite therapeutic indications exist for its proper use.

GASTRIC ULCER: INDICATIONS FOR MEDICAL AND SURGICAL TREATMENT*

By WILLIAM C. BOECK, M.D.
Los Angeles

DISCUSSION *by Fred H. Kruse, M.D., San Francisco; William P. Kroger, M.D., Los Angeles; Philip Corr, M.D., Riverside.*

AS the subject signifies, there are two methods of treating gastric ulcer, and for each there are definite indications. Our viewpoint on this question has gradually changed since 1909 from one which considered that all gastric ulcers should be treated surgically to that of today, which accords medical treatment more justifiable consideration.

TYPES OF GASTRIC ULCER

We speak of various types of gastric ulcer based, for the most part, upon clinical symptoms. They are: (1) acute perforating; (2) obstructing; (3) hemorrhagic; and (4) simple chronic perforating varieties. The first three are complications of the simple gastric ulcer, and will be discussed briefly because there is little disagreement as to the type of treatment indicated.

* Read before the General Medicine Section of the California Medical Association at the sixty-sixth annual session, Del Monte, May 2–6, 1937.

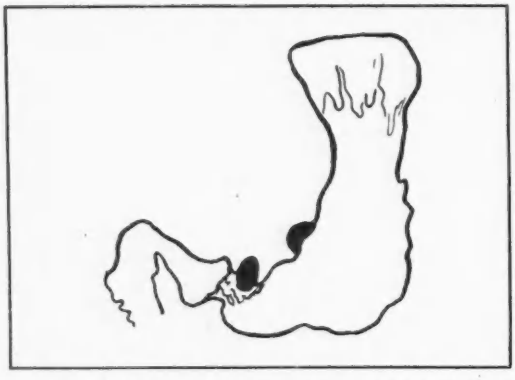


Fig. 1.—Multiple gastric ulcers in prepyloric and fundal areas on the lesser curvature.

ACUTE PERFORATING GASTRIC ULCER

As to acute perforating gastric ulcer, the treatment is always immediate surgical interference, and as to gastric ulcers causing obstruction either at the pylorus or in the fundus, due to an hourglass deformity, I believe a week of medical treatment, supportive in nature, to correct dehydration, tendency to alkalosis, etc., is indicated. If the obstruction still persists at the end of this time, then it is most likely due to cicatrization, and not spasm or edema, and surgery is indicated.

Next, what should be the treatment of hemorrhagic gastric ulcers? I believe it is generally agreed by both surgeons and internists that the treatment here is medical from the outset. Medical treatment may elect to starve these patients for forty-eight hours, as has been the usual custom, or, what I believe is better, to begin feeding them a soft bland diet at once after the method reported from Copenhagen by Muelengracht.[1]

In these cases, transfusions constitute an important factor in medical management. We must not be afraid to give 500 or even 1,000 cubic centimeters of whole blood at one time, if the blood loss has been great, because these larger amounts for transfusion do not precipitate new bleeding while they contribute greatly to the patient's support.

Recurrences of massive hemorrhage may happen within the year, and the ulcer may have healed only to recur, and each time with massive hemorrhage. These instances of recurring hemorrhagic gastric ulcers, I believe, should have such surgical treatment as will, if possible, remove the ulcer. The surgery, however, should not be done until the bleeding stops, as it does in nearly all of these cases.

SIMPLE CHRONIC PERFORATING GASTRIC ULCER

Let us now consider the treatment of the simple chronic perforating gastric ulcer. These ulcers occur posteriorly in over 95 per cent of the cases, along the lesser curvature. They may be small or large, single or double.

The treatment of this type of ulcer has undergone a great change since 1909. During the rapid advance of gastric surgery from 1909 on, the medical profession was persuaded to regard these lesions as "potentially malignant," and, therefore, surgical treatment of gastric ulcer was always indicated. This happened as a result of the surgical opinion expressed by such great surgeons as Mayo-Robson,[2] Moynihan,[3] Mayo,[4] and others, that cancer of the stomach begins as a gastric ulcer; and also as a result of the opinion of prominent pathologists that cancer developed from a previous ulcer in 71 per cent of the cases (Wilson and MacCarty[5]). Other pathological studies indicated that malignant changes were coexistent with inflammatory changes in 68 per cent of the specimens resected for gastric ulcer (MacCarty[6]).

But in the years to follow, this conception became changed, chiefly as a result of the follow-up studies conducted upon patients who had had a gastro-enterostomy performed upon them for gastric ulcer, but had not had the lesion removed. If it were true that malignant changes were present in two-thirds of all gastric ulcers, then these cases should have developed cancer in subsequent years; but Bamberger[7] found only twenty-two cases (2.2 per cent) out of 1,025 such gastro-enterostomized patients; Moynihan,[8] 3 per cent; Eiselberg,[9] 5 per cent; Balfour,[10] 6 per cent; Greenough and Joslin,[11] 1 per cent, and Sherren,[12] no cases of cancer in two hundred patients so operated.

But even this incidence of cancer in these cases is to be expected, partly from errors in diagnosis, provided cancer developed within one or two years after operation, and partly from natural causes if malignancy developed after the first or second year; for Bevan[13] has pointed out that, inasmuch as the frequency of the transition of ulcer of the stomach into cancer varies from 2 to 5 per cent, it is easily conceivable why from 2 to 5 per cent of ulcers should become malignant, since a similar percentage of individuals living to the ages of forty to sixty ordinarily develop cancer of the stomach as a natural course.

Medical opinion is inclined at present to no longer subscribe to the conception, originating twenty years ago, that these ulcers are potentially malignant; but, on the other hand, that at least 95 per cent of them are benign and remain so. MacCarty[6] is more conservative now, and estimates that only 10 to 15 per cent of gastric cancer may have come from gastric ulcer, while Hinton and Trubek[15] go so far as to state, in their recent paper, ". . . once a gastric ulcer, always a gastric ulcer . . ." As a result, the chief indication for prompt surgical treatment of gastric ulcer is eliminated and treatment becomes medical at the outset, provided we can make a reasonable differentiation between malignant ulcerous lesions and benign gastric ulcers.

DIAGNOSIS

Let us examine into the means of diagnosis which we have that help us to decide this issue.

Pathological diagnosis, the most reliable of our methods, is only applicable before surgery whenever there are accessible metastatic glands obtainable for biopsy, but this seldom occurs except in well-developed gastric cancer, when x-ray diagnosis is also competent. Obviously, it is of little help to us preoperatively.

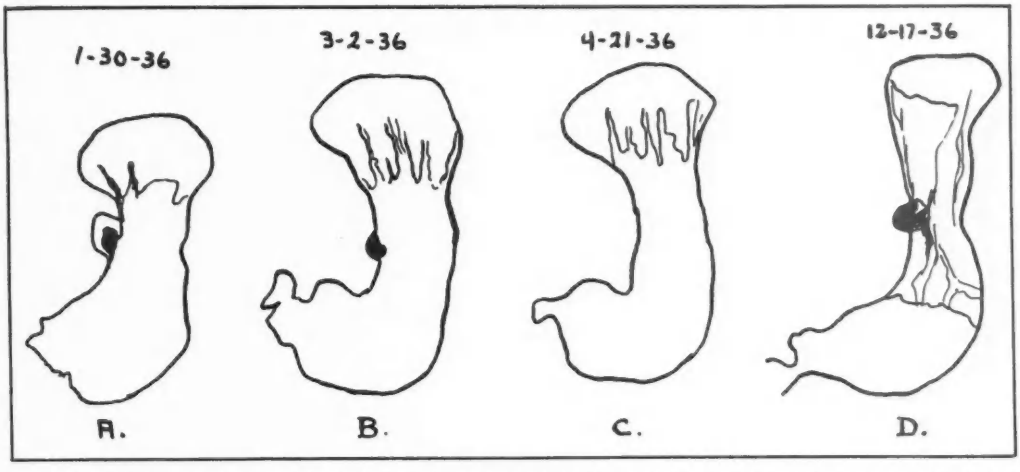


Fig. 2.—Progressive stages in the healing (a, b, c) of a gastric ulcer, and its recurrence (d) one year later; benign lesion.

X-ray examination is, perhaps, our best method of diagnosis before undergoing any operation. X-ray examination, together with pathological and therapeutical studies, has shown that 90 per cent of all ulcers on the lesser curvature proximal to the pylorus are benign ulcers, and 10 per cent of the ulcers in the prepyloric area are benign, while 90 per cent of such ulcerous lesions in this area are apt to be malignant. This is well illustrated by studies of Stewart[16] in England; Holmes and Hampton,[17] and Eusterman and Balfour[14] in the United States.

Gastroscopy is another method employed by some to diagnose the malignant or benign character of these gastric ulcers. Schindler[18] has written considerably about the characteristics of ulcerous gastric lesions, and feels it is possible to differentiate between malignant and benign lesions. I am of the opinion, however, that gastroscopy cannot help in the diagnosis of cases of early malignancy when pathologists, themselves, have difficulty with these lesions.

One case of mine illustrates the difficulty the gastroscopist has in differentiating malignant degeneration of a previously benign gastric ulcer.

REPORT OF CASE

The ulcer occurred in a man, sixty-one years of age. He had suffered from recent repeated hemorrhages during January, 1936, and the bleeding was only stopped after five transfusions. A large perforating ulcer, containing an air bubble, was present on the lesser curvature above the angle of the stomach. The patient had an achlorhydria. On medical management, this ulcer was almost healed in eight weeks, and had disappeared in twelve weeks. During the next eleven months the patient gained sixty pounds in weight and felt fine until the middle of December, 1936, when ulcer symptoms recurred, along with slight hemoptysis. X-ray showed a recurring gastric ulcer in the same location as before. A gastroscopic examination was performed by a trained gastroscopist, and malignant changes were reported. Operation was decided upon, and the lesion was excised. Pathological examination of serial sections failed, however, to reveal any evidence of malignancy, but only inflammatory changes. Much more reliable, after all, was the factor of location for 90 per cent of all such lesions in this location, are benign, and in this case a therapeutical test proved it once, and pathological examination, the second time.

Peritoneoscopy, another method of diagnosis, is not apt to be very useful in differentiating a malignant from a benign gastric ulcerous lesion unless metastasis occurs. Also, the size of an ulcerous lesion is not a good criterion upon which to decide its character (Alvarez and MacCarty[19]), because larger ulcers may be benign and small ones malignant. Likewise, our laboratory tests are of no help in deciding whether a gastric ulcer is malignant or benign, because the findings are common to both lesions. And while it is usually true that benign gastric ulcers give a longer history of trouble than malignant ulcerous lesions, yet the history is not a reliable criterion of diagnosis. The symptomatology also is not a reliable criterion of diagnosis because, in many cases, while it is suggestive of simple ulcer, it may also suggest malignancy on account of the symptoms having become progressively worse.

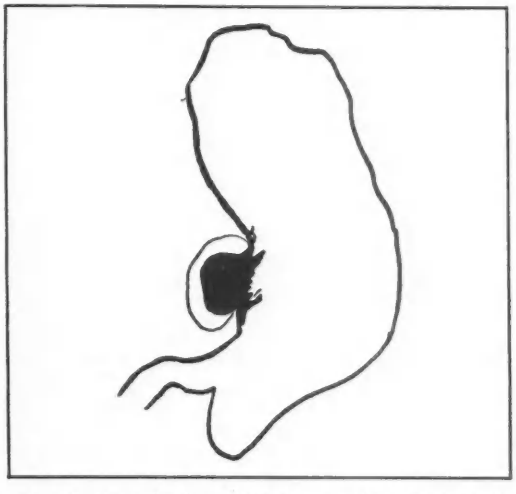


Fig. 3.—Large benign gastric ulcer; perforating and with air bubble.

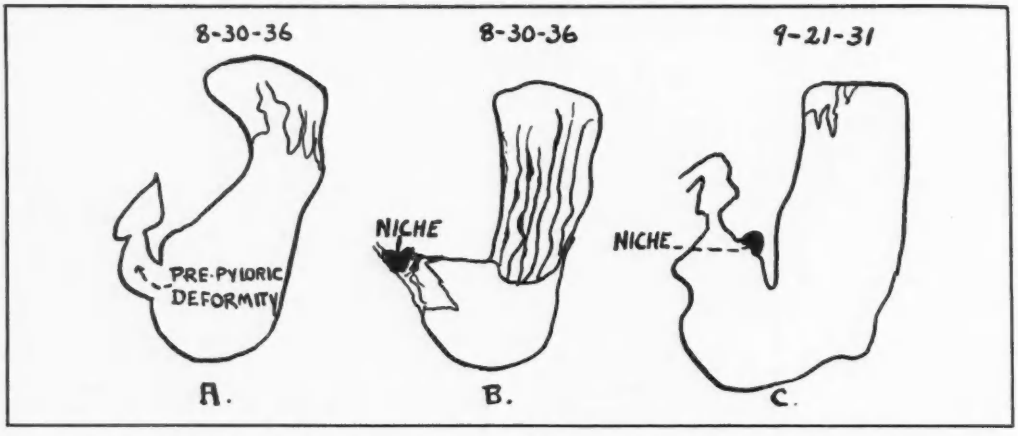


Fig. 4.—(a) Prepyloric spasm from malignant gastric ulcer. (b) Shows the niche, and (c) shows the prepyloric ulcer five years before.

PRESUMPTIVE DIAGNOSIS

We may conclude that before operation our methods of diagnosis—namely, laboratory, x-ray, gastroscopy, history, physical examination, and symptomatology—do not enable us to be certain whether the chronic gastric ulcerous lesion is benign or malignant. Of these methods, x-ray is probably the most important, since it determines the location; and then come the history, symptomatology, and gastroscopy as valuable aids to diagnosis. At best, however, the examination can only result in a presumptive diagnosis; and we are helpless except in one particular, *i. e.*, the "time factor."

TIME FACTOR

This time factor is most deserving of more consideration as a criterion of differentiation of malignant from benign ulcerous gastric lesions, for we have seen, from surgical follow-up studies, that were we to do nothing at all to the lesion, probably 95 to 98 per cent of them would prove to be benign, and 2 to 5 per cent malignant. Studies also show that when a given lesion is probably malignant, although it looks like a benign lesion, the symptoms and the lesion do not completely disappear with medical management. In other words, we must be willing to wait long enough for evidence of healing which indicates a lesion is benign, or failure to heal which indicates the lesion is probably malignant; and this evidence is usually obtainable in two to eight weeks.

SCHEME OF MEDICAL MANAGEMENT

In applying this time-factor criterion to the treatment of these gastric ulcers, some definite scheme of medical management is indicated at the outset, and it should embody the following principles:

1. All chronic gastric ulcers, regardless of situation, size, achlorhydria, melena, and history should have the benefit of medical treatment. This has been advocated by Jordan,[20] Lahey,[21] and Scott.[22]

2. Benign lesions will give evidence of healing by:

(*a*) Improvement or loss of symptoms within first or second week.

(*b*) Cessation of bleeding within second to third week.

(*c*) Diminution in size of ulcer crater by x-ray examination within second to fourth week.

(*d*) Continuous decrease or disappearance of ulcer crater within third to eighth week.

(*e*) Failure of symptoms and ulcer to disappear indicates probable malignancy.

I have seen fit in most cases in my own practice to conduct medical management for as long as eight weeks while looking for evidence of healing. Although this evidence of healing may occur within three weeks, it sometimes takes longer, so that one is often justified to wait, as advised by Jordan and Lahey and Scott, before asking for surgical intervention. Even when surgery is accomplished, the resected lesion may prove to be benign since old callous ulcers may resist healing, yet the patient has been given a fair chance on medical management.

One should exercise utmost vigilance in the case of prepyloric lesions, since the prepyloric area is the home of most malignant lesions. One may want to advise surgical intervention as early as the end of three weeks in those cases showing little or no healing, but often the same or more deformity of the stomach at the end of this time.

REPORT OF CASE

As an example, let me cite the case of a man thirty-five years of age, who had had medical management for an alleged duodenal ulcer over a period of four years, but with only transient periods of relief. My x-ray examination did not substantiate the diagnosis of a duodenal ulcer, but instead a prepyloric gastric ulcerous lesion was found associated with marked gastrospasm. Because of the failure of medical treatment, and because of the prepyloric location of the ulcer, surgery was advised and a resection was made. The gastric ulcer was 2½ by 4 centimeters, shallow, and was diagnosed carcinoma by two pathologists. No glandular metastasis was noted. No duodenal ulcer was present. The earlier x-rays, four years before, indicated a small gastric ulcer in this area, which was overlooked.

3. It is essential that, during this time of medical management, frequent x-ray examinations be made to observe if any decrease occurs in the size of the lesion. The criticism to be made of the conduct of most cases is that this important method of check-

ing progress is not made use of sufficiently. There should be an examination every two or three weeks, as a minimum, in the beginning of medical treatment, and subsequently at intervals of three to six months after healing, in order to learn of any recurrence.

4. Healing with recurrence is no criterion of the benign lesion becoming malignant; when ulcers recur, medical management at first is again indicated, and only when failure to heal has been demonstrated, is surgery advisable.

5. Medical management on an ambulatory ulcer diet (with prohibition of alcohol and smoking, if possible) should continue as long as the patient lives, to prevent any recurrence of the gastric ulcer in the same, or some other location.

6. The criteria of complete healing should be:

(*a*) Disappearance of symptoms.

(*b*) Disappearance of melena under strict control.

(*c*) Disappearance of ulcer niche by x-ray examination.

(*d*) Disappearance of ulcer by gastroscopic examination.

I believe gastroscopy has an important place as a check to the final disappearance of the lesion, since it answers the criticism of those who claim that an ulcer may have disappeared in the x-ray and still be present because its crater was filled with fibrin, mucus, or food matter, and was, therefore, not demonstrable. I do not feel, however, that gastroscopy need be routinely employed for this purpose, because subsequent x-ray examinations would prove whether or not the lesion was present.

IN CONCLUSION

In summary, may I state that surgical treatment is indicated immediately in cases of (1) acute perforated gastric ulcer, and (2) obstruction due to cicatricial pyloric or fundal stenosis. Furthermore, that medical treatment is indicated in all cases of (*a*) massive hemorrhage from gastric ulcer, and (*b*) in all cases of simple chronic perforating types of gastric ulcer for at least eight weeks, after which, if healing does not occur then, such appropriate surgical methods of treatment are indicated as will remove the lesion, and by as simple procedure as possible.

By employing the factor of time as a criterion, we shall give these ulcerous gastric lesions uniform consideration and arrive at a diagnosis of probable malignancy or benign ulcer by the most satisfactory method we possess at present. In this way, I believe our mortality from surgery (average 5 per cent) will still be less, since surgery will be done on fewer but deserving cases. We will have more satisfactory follow-up studies to help determine the incidence of cure from the removal of malignant ulcerous lesions. Anyone who has read the report of Cole [23] on "The Pathological Yardstick" cannot help being impressed with this necessity. I believe that the opinion of more than one pathologist is always desirable when malignancy is diagnosed.

May I conclude with a quotation from Lahey,[24] a foremost surgical authority:

> One not infrequently hears and reads that the way to improve our results of cancer of the stomach is to submit all gastric lesions to radical surgery, in order that a carcinoma may not be overlooked, and in order that malignant degeneration of gastric ulcer does not occur. This is, I believe, a wrong attitude, and were it employed on a large scale, the operative mortality would at least approximate, if not surpass, the percentage of gastric carcinomas which are missed under the plan of preoperative segregation by frequent roentgen-ray observation while under a short period of hospital observation under medical management.

2210 W. Third Street.

REFERENCES

1. Muelengracht, E.: Treatment of Hematemesis and Melena with Food, Lancet, 2:1220-1221 (Nov.), 1935.

2. Mayo-Robson, A. W.: Importance of an Early Diagnosis of Cancer of the Stomach, Brit. M. J., 1:949-953 (April), 1903.

3. Moynihan, Sir Berkeley G. A.: Review of a Series of Operations for Cancer of the Stomach, Brit. M. J., 1:370-373 (Feb.), 1906.

4. Mayo, W. J.: Contributions of Surgery to Better Understanding of Gastric and Duodenal Ulcer, Ann. Surg., 45:810-817 (June), 1907.

5. Wilson, L. B., and MacCarty, W. C.: The Pathological Relationship of Gastric Ulcer and Gastric Carcinoma, Tr. A. Am. Physicians, 24:593-602, 1909.

6. MacCarty, W. C.: Pathology and Clinical Significance of Stomach Ulcer, Surg. Gynec., and Obst., 10:449-463 (May), 1910.

7. Bamberger, Leopold: Die Innere und die Chirurgische Behandlungen des Chronische Magengeschwüre und ihre Erfolge. J. Springer, Berlin, 1909.

8. Moynihan, Sir Berkeley G. A.: Two Lectures on Gastric and Duodenal Ulcers. John Wright & Sons, Ltd., Bristol, 1923.

9. Von Eiselsberg, A.: Choice of Method of Operation in the Treatment of Gastric and Duodenal Ulcer, 19:555-567 (Nov.), 1914.

10. Balfour, D. C.: Results of Gastro-Enterostomy for Ulcer of the Duodenum and Stomach, Ann. Surg., 92:558-562 (Oct.), 1930.

11. Greenough, R. B., and Joslin, E. P.: Gastric Ulcer at the Massachusetts General Hospital, 1888-1898, Am. J. M. Sc., 118:167-183 (July), 1899.

12. Sherren, J.: Contribution to the Discussion on the Choice of Operation in Chronic Gastric and Duodenal Ulcers, Surg. Gynec., and Obst., 19:564-567 (Nov.), 1914.

13. Bevan, A. D.: Cancer of Stomach, Proc. Interstate Postgrad. Assembl. North America (1927), 3:124-130, 1928.

14. Eusterman, George B., and Balfour, D. C.: The Stomach and Duodenum. W. B. Saunders Company, Philadelphia, 1935.

15. Hinton, J. W., and Trubek, M.: The Transformation of Gastric Ulcer into Gastric Carcinoma, Surg., Gynec., and Obst., 64:16-21 (Jan.), 1937.

16. Hurst, A. F., and Stewart, M. J.: Gastric and Duodenal Ulcer, Oxford Medical Publications, Oxford University Press, New York, 1929.

17. Holmes, G. W., and Hampton, A. O.: The Importance of Location in the Differential Diagnosis of Benign and Malignant Gastric Ulcerations, New Eng. Med. J., 208:971-976 (May), 1933.

18. Schindler, R.: Diagnostic Gastroscopy, with Special Reference to the Flexible Gastroscope, J. A. M. A., 105: 352-355 (Aug.), 1935.

19. Alvarez, W. C., and MacCarty, W. C.: Sizes of Resected Gastric Ulcers and Gastric Carcinomas, J. A. M. A., 91:226-231 (July), 1928.

20. Jordan, S. M.: Gastric Ulcer and Cancer, J. A. M. A., 93:1642-1648 (Nov.), 1929.

21. Lahey, F. H.: The Treatment of Gastric and Duodenal Ulcer, J. A. M. A., 95:313-316 (Aug.), 1930.

22. Scott, W. J. Merle: The Possibility of Malignancy as It Affects the Treatment of Chronic Gastric Ulcer, Ann. Surg., 102:586-604 (Oct.), 1935.

23. Cole, L. G.: The Pathological Yardstick: Its Accuracy as an Instrument for Measuring Errors in Clinical, Roentgenological and Surgical Diagnosis of Gastric Lesions, Surg., Gynec., and Obst., 63:689-717 (Dec.), 1936.

24. Lahey, F. H.: Cancer of the Stomach, Surg., Gynec., and Obst., 62:246-248 (Feb.), 1936.

DISCUSSION

FRED H. KRUSE, M.D. (384 Post Street, San Francisco).—While I must praise Doctor Boeck's general conclusions, I would be inclined to make his opening paragraph, in reference to the treatment of gastric ulcer, much stronger in favor of persistent medical management by saying that our viewpoint today holds the problem essentially a medical one, and that only intractability, or other more limited considerations, render surgical treatment justifiable.

Acute perforation is one of these undoubtedly; and the prepyloric ulcer that is not readily controlled, or that does not indicate healing, is too dangerously located to encourage prolonged temporizing.

On the other hand, I would be inclined to give the apparent obstructive lesions, even an hour-glass deformity, more time under medical treatment, a part of which might be directed toward mechanical relief, by regularly emptying the stomach by tube, in an endeavor to ascertain whether the viscus might not regain compensation. Emery has questioned actual cicatrization in most of these lesions, and emphasizes the need of more prolonged treatment in relieving the real underlying factors of spasm, edema, and fibrosis.

I quite agree with Doctor Boeck's statements about hemorrhage in gastric ulcer, especially recurrent, massive hemorrhage. In this condition it is well to remember that an enormous toxic destruction of protein takes place after such bleeding with an elevation of the blood urea and nonprotein nitrogen, which produces great dehydration and a state approaching uremia; and unless this condition is corrected leads to death from uremia. Especially, for that reason alone, surgery is best deferred, if medical control is at all possible.

In respect to the simple, chronic perforating gastric ulcer, intractability or some one of the complications that render it nonamenable to medical treatment have been my chief reasons for resorting to surgery, and not so much the fear of malignancy. I am glad to hear that Doctor Boeck does not feel that the size of the crater is an arbitrary indicator of the probability of malignant degeneration.

In considering the doubtful benign or malignant gastric lesion, I highly commend the procedure recommended by Doctor Boeck under time factor, only I have called it the therapeutic test. In applying this test of treatment to such a lesion, to be satisfactory we should insist upon absolute relief of symptoms in a few days, and conclusive evidence of recession or disappearance by x-ray in several weeks.

What about the degree of acidity?

I still believe that a proper gastric analysis tells us a lot about the doubtful lesion.

True, in 10 to 15 per cent of gastric cancers have a normal or high acidity, and 10 to 15 per cent of peptic ulcers have subnormal or anacidity.

In doubtful cases, instead of the usual Ewald meal, it may be best to try a carefully controlled gastric analysis, as described by Bloomfield and recently by Cranston Holman: injecting histamin subcutaneously, followed by continuous aspiration for thirty minutes, measuring the volume of secretion and height of acidity in three ten-minute periods.

It has been found that practically all persons with gastric and duodenal ulcer have high acidity and large secretory volume. No single finding is infallible, but a lesion in the stomach associated with a low or absent gastric acidity is one that makes operative intervention advisable —if there has been an accurate gastric analysis.

Obviously, a small percentage of gastric lesions defy all the means now available for the correct diagnosis, including actual exploration, and thus proper treatment remains in doubt.



WILLIAM P. KROGER, M.D. (1930 Wilshire Boulevard, Los Angeles).—The last decade has brought the surgeon and internist more and more in accord in their thoughts regarding the treatment of all peptic ulcers. The days are not far gone when the surgeon viewed with alarm the delay of the internist in bringing these patients to operation, and the internist viewed with alarm the apparent overalacrity with which the surgeon operated upon such patients.

Time and experience have softened such dogmatism, and we now agree upon essential points.

In the main we have no points of difference with Doctor Boeck's program. We have felt, for some years, the need of a greater recognition and practice of a regimen such as has been outlined, and it is only by following such a program that much needless surgery will be eliminated.

The plan is simple, and is backed by facts. As Doctor Boeck has shown, when 90 per cent of gastric ulcers found proximal to the pylorus are benign, it is imposing no great danger upon a patient to delay eight weeks for a therapeutic test which will differentiate between a malignant or a benign lesion. We heartily endorse this procedure, and hope that it will be generally accepted and followed.



PHILIP CORR, M.D. (Mission Inn Rotunda, Riverside). The subject under discussion is that of gastric and not duodenal ulcer.

This distinction is important because of the different problems involved. When considering duodenal ulcer there is no concern as to whether or not the ulcer is carcinomatous. With a gastric ulcer one must always give the matter of cancer consideration, no matter on what side of the argument one is on concerning whether or not gastric ulcers become malignant. The chief concern, from what Doctor Boeck has told us, is not whether the ulcer will become malignant, but whether it is malignant now.

In spite of my respect for the time-honored history and physical examination, one must concede first importance to expertly conducted fluoroscopic and x-ray examinations in the differential diagnosis of peptic ulcer. Second place should go to the gastric analysis. Gastroscopy promises to give some help in expert hands. Only occasionally should it be needed to help solve the problem of malignancy vs. gastric ulcer. As yet we hesitate to rely on it completely. If peritoneoscopy must be resorted to in order to make the diagnosis, it seems to me that it would be safer to settle the question more definitely by more inclusive surgical procedures. It is hardly necessary to repeat that with all the available evidence possible in certain cases of gastric lesions it is impossible for even the most competent to determine the matter of malignancy preoperatively.

In general, medical measures for the uncomplicated cases of gastric ulcer should be relied upon, but where there still remains a reasonable doubt concerning malignancy, surgery should be advised. After all, surgery often is a great help in the treatment of nonmalignant gastric ulcer.

In the simple gastric ulcer cases where the coöperation of the patient cannot be obtained, surgery will be considered. Perhaps it will be considered too quickly by ambitious surgeons and unresourceful physicians. One should recall that, while success may follow their dramatic efforts, recurrent ulcers or gastrojejunal ulcers may require even more careful medical management than would have been needed preoperatively.

If Hippocrates were faced with the modern problems of gastric ulcer, so competently presented in this paper, he would derive further satisfaction in contemplating his philosophical first aphorism that, "Life is short, and the Art long; the occasion fleeting; experience fallacious and judgment difficult. The physician must not only be prepared to do what is right himself, but also make the patient, the attendants, and the externals coöperate."

WATER EXCHANGE IN SURGICAL CASES*

By Donald A. Charnock, M.D.
Los Angeles

Discussion *by Carl Rusche, M. D., Hollywood; Clark M. Johnson, M. D., San Francisco; Jay J. Crane, M. D., Los Angeles.*

UNDER normal conditions there exists, in the body, an adjustment between the intake and output of water which results in the maintenance of the water content at a fairly constant level. In conditions of health an individual automatically cares for his fluid needs through response to hunger and thirst. During illness the water supply must frequently be governed by the physician.

PLACE OF WATER IN THE BODY

Next to oxygen, water is the most important constituent of the body. It represents 70 per cent of the body weight. It is essential in the physiological processes of cellular metabolism, and is the chief vehicle for the elimination of waste products and for the dissipation of heat. In starvation an animal can lose 40 per cent of its body weight, including practically all of its glycogen and fat, and half of its body protein, and still live; whereas the loss of 10 per cent of the water content of the body results in serious disorders, and the loss of 20 per cent results in death.[14]

HOW STORED

Water is stored in the body as interstitial and intracellular fluid. The former is present as isotonic saline solution. In this form it can be transported by the vascular fluid and adapted to the various needs of the body. The intracellular water is present in chemical combinations as water of hydration, or in the liquid phase of colloidal structures. As such it is not available for instant use.

HOW INTERCHANGED

The interchange between the blood and the other fluid groups depends upon osmosis, the gradient in either direction shifts delicately in response to the concentration of solids within the fluids. In dehydration it is the interstitial reservoir that sustains the volume of the blood plasma. Conversely, with an excess accumulation of fluids, the edema which may develop is localized within this compartment, with the result that the blood plasma remains undiluted. The vascular and interstitial fluids are practically alike chemically, but both differ from the intracellular fluid. This may explain why the intracellular fluid is not easily available to bolster a depleted plasma volume.[9]

SOURCES OF WATER IN THE BODY

Water becomes available to the body from the fluids and food. It is eliminated by the urine and stool, and as insensible water by way of the lungs and skin. More water is obtained from solid food than is generally recognized. The first contribution comes from the actual water content. The second

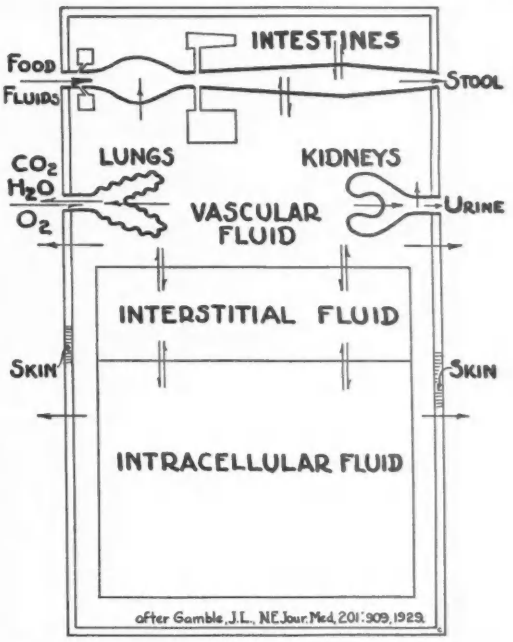


Chart 1.—A graphic representation of the body fluids together with an indication of the routes of intake and outgo.

contribution occurs during metabolism. This may be illustrated by the simple equation of the oxidation of glucose.

$$C_6H_{12}O_6 + 6O_2 = 6CO_2 + 6H_2O$$

In the estimation of the intake, obvious fluids can easily be measured. The water content of the food may be obtained from prepared tables, or actually determined by evaporating sample diets. Calculation of the water of oxidation depends upon a knowledge of the composition of the food. The caloric values are multiplied by the amount of water the foodstuffs are known to give. Where the caloric composition of the food utilized is unknown (and this generally obtains in sick patients), the metabolic mixture may be calculated, utilizing the procedure devised by Newburgh and his associates.[15]

The water content and water of oxidation of the diet has been found to amount to about 90 per cent of the total weight of the food.[8] For general considerations, the total food weight may be considered as water. The fluid drunk, plus the weight of the food eaten, equals the water intake. In the case of the sick patient who eats no food, the oxidation of the body tissue will liberate some water. It is rarely more than 500 cubic centimeters daily, and

Table 1.—*Water Content of Food*

Food Product	Water Formed Per Gram
Protein	0.4 gram
Carbohydrates (average)	0.6 gram
Fat	1.07 grams

* Read before the Urology Section of the California Medical Association at the sixty-sixth annual session, Del Monte, May 2–6, 1937.

may be disregarded unless great accuracy requires its calculation.

WATER NEEDS OF THE BODY

In estimating the water needs, the first call on the body fluids goes to supply the insensible water lost by way of the lungs and skin. The determination of this requires weighing the patient daily and calculation of the food value utilized. Newburgh and Wiley[12] have found, by very careful studies, that normal adults eliminate from 1,000 to 1,500 cubic centimeters daily as insensible water. Extending these studies to surgical patients, Coller and Maddocks[2] showed that the unusual heat production and active perspiration attendant upon surgical procedures may easily increase this to 2,500 cubic centimeters or over. In general, for sick surgical patients insensible water can safely be estimated at two liters a day. This large water loss is not considered if water balance is measured as the relationship of fluids drunk to urine passed as is done by the intake and output method. This will explain why patients receiving supposedly adequate amounts of water will exhibit the symptoms of dehydration.

The second fluid need is for sufficient water to insure adequate renal elimination. An average of 35 grams is a fair estimate of the urinary solids passed daily. The volume of water necessary to carry off this amount depends upon the concentrating ability of the kidneys. If the kidneys possess the ability to concentrate urine to 1.030, five hundred cubic centimeters will suffice. In kidneys only able to concentrate urine to 1.010 the amount of water necessary is increased to 1,500 cubic centimeters. To insure complete renal elimination without taxing the kidneys to their maximum, 1,000 to 1,500 cubic centimeters of water should be available. In the inadequate or infected urinary tract more than this is often desirable.[10]

For stool elimination rarely more than 200 cubic centimeters is lost daily. Unusual diarrhea must be added to the total output.

To these figures any abnormal loss of fluid must be added. This includes blood loss, quantity of vomitus, loss of fluids from drainage, from sputum, and from burned areas.

ESTIMATION OF DAILY WATER NEED

In tabulating the daily water need, the necessary amount reaches between 2,500 and 3,500 cubic centimeters in order to maintain an adequate fluid balance. To compensate for this output, the patient must either take fluids and food by mouth, or derive the water from the body tissues. The alternative is met by parenteral therapy.

WATER, FOOD, AND CHEMICAL NEEDS OF SICK PERSONS

One of the important advances in modern medicine is the ability to supply sick patients with water, food, and necessary chemicals when their normal digestion is disturbed. Opinions may differ as to choice of fluids given, but there can be no objection to the premise that the patient should receive as nearly as possible what is required to maintain a normal fluid and chemical balance.

WATER NEEDS OF POSTOPERATIVE PATIENTS

The most common need of postoperative patients is for water. This may be given in a variety of solutions, the most convenient being isotonic dextrose solution, physiological salt solution, and Ringer's solution. Dextrose may be dissolved in either of the saline solutions or in distilled water. In general, it is good practice in all dehydrated cases to give dextrose solution. The dextrose is quickly oxidized, thus releasing the water. Four calories are obtained for every gram used which helps prevent ketosis and replenish the supply of glycogen in the liver. The optimum range of concentration for dextrose solution lies between three and six per cent. Five per cent dextrose is isotonic with the blood.[7,16]

WATER NEEDS IN DEHYDRATED PATIENTS

The most critical water need is present in the patient entering the hospital in a dehydrated condition. Here the clinical signs may be evident, but as yet there is no adequate quantitative test to indicate the degree of dehydration. The blood picture may show a concentration of the plasma by the presence of a polycythemia. The hematocrit percentage may be increased.[4] Knowing that the water available for renal exchange is decreased in such cases, Coller and Maddock dehydrated normal individuals to a point where the classical clinical symptoms were present. There was a rise in the nonprotein-nitrogen of the blood which paralleled the weight loss. The use of blood nitrogen retention values as an indication of dehydration is evidenced by these experiments. An increased nonprotein-nitrogen, which drops when adequate fluids are given, signifies dehydration rather than urinary retention.

From these studies the investigators were able to demonstrate that 6 per cent of the body weight in water was necessary to restore a dehydrated individual to normal. This, of course, in addition to the daily needs.

Dehydration may progress to a point where anuria results, as the water necessary for vaporization takes precedence over the water available for urinary exchange. Anuria, or diminished secretion of urine following surgery, is generally directly related to insufficient fluids.[1]

RÔLE OF THE ELECTROLYTES

Second only in importance to water in the blood and interstitial fluid are the electrolytes. An elaborate mechanism exists to maintain these chemicals at a constant level. Nevertheless, loss does occur, especially following profuse emesis, copious diarrhea, heavy perspiration or extensive exudations. In these cases both the sodium and chlorid ions are lost. The degree may be measured by an estimation of the blood chlorids and CO_2 combining power. These two electrolytes are lost in nearly enough equal concentration to allow of either

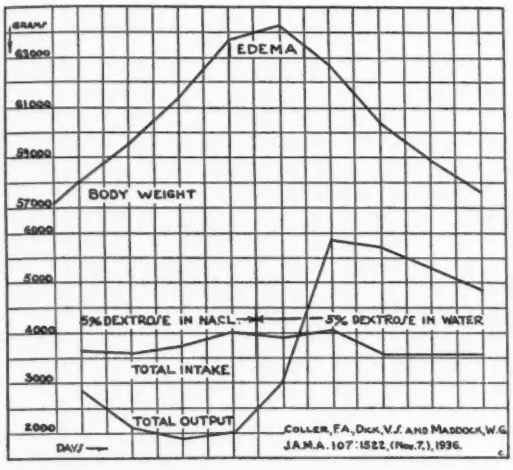


Chart 2.—Demonstration of the production of edema with administration of saline solution and the subsequent disappearance of the edema when the solution is changed to simple dextrose.

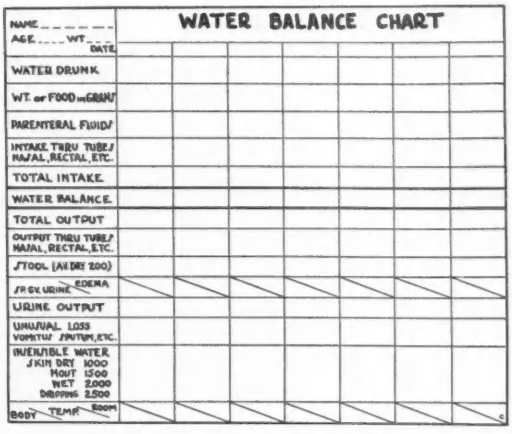


Chart 3.—A water balance chart which requires no calculation. Arbitrary values are used for the ordinarily calculated amounts. Specific gravity of urine and temperature figures are given for completeness only. They are put in an oblique area to guard against their being added in the totals.

physiological saline or Ringer's solution being used for therapy. The value of saline in cases of intestinal obstruction has been conclusively demonstrated.[8,13] In administering fluids to compensate for vomiting, it may be remembered that the saline content of emesis is about equal to that in normal saline solution.

Dextrose can be given for its caloric value in hypertonic solutions, but it is rarely advisable to exceed 10 per cent. Above this the dextrose is not usually completely oxidized, and its excretion by the kidneys requires water from the body reservoir. Metabolic balance cannot be maintained by dextrose alone. A drop in the plasma proteins can be artificially replaced only by transfusions of whole blood.

EXCESSIVE USE OF SALINE SOLUTION

The continued use of saline solution above its physiologic needs results in the appearance of edema. Coller and Maddock have demonstrated that sick patients on continued saline and Ringer's solutions developed edema, while those given simple dextrose solution often did not.[5]

The appearance of edema indicates a drop of the plasma proteins below the critical level, and an accumulation of sodium ion rather than the chlorid ion.[6] This necessitates the discontinuance of saline solutions. When these cases are still in need of augmented fluids, simple dextrose solution will maintain the fluid balance and often correct the edema. As the glucose is oxidized, the excess salt in the tissue is taken up by the water.

INTRAVENOUS THERAPY

The optimum rate of flow in intravenous therapy is 500 cubic centimeters per hour. This will result in practically no reactions. At this rate, 5 per cent dextrose is completely burned. The temperature of the solution is not so important. It is well to place needles so that sudden movements of the limbs do not result in a puncture of the vessel with an extravasation.

The tendency today is away from subcutaneous injections, because of the pain attendant upon the stretching of the tissues. Where no veins are available and fluids must be given the addition of 10 to 15 cubic centimeters of one per cent novocain to one liter of solution, will greatly reduce the pain during administration.

The use of intravenous fluids in cardiac cases with decompensation is contraindicated, but there is no direct experimental evidence to indicate that a compensated heart is ever damaged or embarrassed by solutions given at a rate of 500 cubic centimeters per hour.[11]

The diabetic case need not suffer from lack of fluids. Dextrose given can be balanced by insulin. Dosage is variable and depends upon the patient's degree of ketosis and level of dehydration.

IN CONCLUSION

The purpose of this paper is not to advocate the use of more intravenous fluids. These should be given only in such quantities as are indicated. In order to facilitate the keeping of an adequate intake and output record, a simple chart has been devised which I submit for your consideration.

The necessity for calculations has been eliminated by the use of values derived from the careful researches of Newburgh and his collaborators,[12,15] and adapted to surgical conditions by the work of Coller and Maddocks.[2,3,4,11] Familiarity with all the factors of water exchange will result in better progress of our surgical cases.

727 West Seventh Street.

REFERENCES

1. Cabot, Hugh, and Iber, F. C.: Anuria, Proc. Staff Meet., Mayo Clin., 8:354 (June), 1933.

2. Coller, F. A., and Maddock, W. G.: Dehydration Attendant on Surgical Operations, J. A. M. A., 99:875 (Sept. 10), 1932.

3. Coller, F. A., and Maddock, W. G.: Water Balance in Surgical Conditions, Internat. Clin., 3:191 (Sept.), 1934.

4. Coller, F. A., and Maddock, W. G.: A Study of Dehydration in Humans, Ann. Surg., 102:497 (Nov.), 1935.

5. Coller, F. A., Dick, V. S., and Maddock, W. G.: Maintenance of Normal Water Exchange with Intravenous Fluids, J. A. M. A., 107:1522 (Nov. 7), 1936.

6. Curphey, W. C., and Orr, T. G.: Edema in Surgical Patients, Surgery, 1:589 (April), 1937.

7. Fantus, B.: The Prescribing of Dextrose Phleboclysis, J. A. M. A., 102:2165 (June 30), 1934.

8. Gamble, J. L., and Ross, S. G.: The Factors of Dehydration Following Pyloric Obstruction, J. Clin. Investigation, 1:403 (June), 1925.

9. Gamble, J. L.: Dehydration, N. E. Jour. Med., 201:909 (Nov. 7), 1929.

10. Lashmet, F. H., and Newburgh, L. H.: A Comparative Study of the Excretion of Water and Solids by Normal and Abnormal Kidneys, J. Clin. Investigation, 11:1003 (Sept.), 1932.

11. Maddock, W. G., and Coller, F. A.: Water Balance in Surgery, J. A. M. A., 108:1 (Jan. 2), 1937.

12. Newburgh, L. H., Wiley, F. H., and Lashmet, F. H.: A Method for the Determination of Heat Production Over Long Periods of Time, J. Clin. Investigation, 10:703 (Oct.), 1931.

13. Orr, T. G., and Haden, R. L.: Chemical Factors in Toxemia of Intestinal Obstruction, J. A. M. A., 91:1529 (Nov. 17), 1928.

14. Rowntree, L. G.: The Water Balance of the Body, Physiol. Rev., 2:116 (Jan.), 1922.

15. Wiley, F. H., and Newburgh, L. H.: An Improved Method for the Determination of Water Balance, J. Clin. Investigation, 10:723 (Oct.), 1931.

16. Willems, J. D., and McNealy, R. W.: Dextrose Solution: Its Optimum Concentration for Therapeutic Administration, Northwest Med., 28:329 (July), 1929.

DISCUSSION

Carl Rusche, M.D. (906 Taft Building, Hollywood).—When one considers the important part that water plays in the body, that it represents at least 70 per cent of the body weight, that the loss of 10 per cent of the water content of the body results in serious disorders, and that the loss of 20 per cent results in death, one immediately realizes the value of a discussion of water balance in surgical cases.

Possibly it is because of our lack of a thorough understanding of the subject and the remarkable accessibility of various intravenous solutions that we overload surgical patients with both fluids and salts. Frequently an edema develops. This is usually due to an overadministration of chlorids; however, edema will subside if the chlorids are discontinued and glucose in distilled water is administered. The loss of water through the skin and lungs is considerable, especially in patients with fever, and this is seldom accounted for in the surgical case. Particularly is this true with our present method of charting intake and output of fluids.

Doctor Charnock's chart will aid materially in keeping a more exact record. The plasma proteins which are lost in large amounts along with the chlorids in draining wounds should be replaced. Blood transfusion is the best method to replace plasma proteins.

It is an established fact that people working in high temperatures must drink water containing a large amount of salt to avoid heat strokes.

Valuable information has been received from the officers at Boulder Dam and those administering hyperpyrexia regarding water exchange and salts in the body.

*

Clark M. Johnson, M.D. (384 Post Street, San Francisco).—The amount and type of fluids that should be administered to a sick patient is often the most debated question among a group of physicians attending the same individual. Doctor Charnock's discussion should be carefully read and considered by every doctor. He has reminded us of physiological fluid losses which we often forget. Wisely, he has intimated that there is no rule for the individual case, and no one test which will indicate just what a patient's fluid balance may be from day to day. He has offered proof that we may overload one patient with moderate amounts of fluid and, on the other hand, fail to supply the relatively enormous quantities that may be required by another. Each sick patient is an individual problem. Fortunately, there is a fairly large margin of safety in both directions. The two questions which are most often discussed are, first, how much fluid is necessary to insure proper renal function; and, second, how much fluid can the circulation stand. In the first instance, there are relatively few who do not realize that the renal burden is lightened by a large amount of fluid and that when there is renal damage fluids are especially essential, the damaged kidney being unable to concentrate and excrete the waste products. The second question relative to the possibility of overloading the cardiovascular system may require constant vigilance and expert clinical judgment. Undoubtedly, the circulation can be embarrassed by too much or too rapidly given intravenous solutions. I believe it is quite difficult to overload the heart with subcutaneous solutions, and that this is often the best method of administration where there is any question about whether the individual is receiving enough water. In fact, I believe that it is a good and safe clinical test. When intracellular salt solution properly given is not quickly picked up, it means either that the cardiovascular system is incompetent or that there is no need for additional fluids. It should not be difficult to distinguish clinically which factor is responsible. Occasionally the urinary output may be very scant in spite of a continued high fluid intake, and with no evidence of gross loss of fluids by the skin or bowel. In such cases there may be considerable fluid stored in the tissue without demonstrable edema. If it is undesirable to further increase the fluid intake, the output may be immediately improved by the intravenous injection of from 50 to 100 cubic centimeters of 50 per cent sucrose. Lacking, as we do, a clinical or laboratory test to guide us in the important question of total fluids required, we should pay more attention to the bedside examination. The condition of the tongue, the breath, the feel of the skin are important. In postoperative or septic patients confined to bed, early edema occurs most often on the back and not the ankles. When large amounts of fluids must be given over a long period of time, the heart, the blood pressure, and particularly the lungs, must be frequently checked. In the aged, one of the first and most serious signs of overloading is increased moisture in the lungs. Doctor Charnock's charts should be useful and prevent us from committing gross errors in either direction by making us more water-conscious.

*

Jay J. Crane, M.D. (1921 Wilshire Boulevard, Los Angeles).—Doctor Charnock's paper is very timely because of the increased tendency today to use intravenous medication whenever possible, and intravenous solutions quite routinely after operative procedures.

Some patients, it is true, become dehydrated after surgery and should have more fluids given, either under the skin or preferably in the vein. On the other hand, there are many patients who are literally flooded with intravenous solutions and whose blood chlorids many times reach a level high above normal.

No surgeon wants to overtax a patient's ability to excrete an overwhelming large amount of unnecessary fluid, nor does he wish to withhold fluids when they are needed, but to estimate accurately what is needed and record it so that someone else can interpret at a glance what is being done, is another thing.

The purpose of Doctor Charnock's paper is not to advocate the use of more intravenous fluids, but to offer a simplified chart to ascertain the amount of fluid which is necessary to maintain a normal balance between the total output and the intake; and for this contribution I know we are all very thankful, for certainly in the past fluids have been given rather haphazardly.

SPECIFIC SENSITIZATION IN NONSPECIFIC URETHRITIS*

By James Steinberg, M.D.
Los Angeles

Discussion *by Louis Clive Jacobs, M. D., San Francisco; Robert V. Day, M.D., Los Angeles; Burnett W. Wright, M. D., Los Angeles.*

MUCH has been written, and considerable discussion has arisen concerning the etiology, course, and treatment of nonspecific urethritis. For years, it has been one of the most annoyingly persistent conditions confronting the clinician.

Certain previously unexplainable peculiarities have been observed which have materially differed from gonorrheal urethritis. Among these are the irregularity of the discharge from day to day regardless of the intensity of local treatment, the absence of chronicity, spontaneous recovery without treatment, frequent unexplainable recurrences and different types of discharge, such as purulent or mucoid.

The usual well-known remedies of prostatic massage, urethral irrigations, injections, instillations, and dilatations have in most instances not affected the condition in the simple uncomplicated types.

In the past it has been noticed that most of the cases have shown urethral discharge for two or three days, with a recession for one or two days and then an exacerbation of the discharge without regard to the regularity or even abstinence from local treatment. Many patients have recovered and the discharge has disappeared just as suddenly and unaccountably as it appeared in the first place, only to reappear later in from six months to a year or more without any apparent reason.

A typical competent observation on the phenomena of nonspecific urethritis is made by Barbillion[1] in the *Journal D'Urologie* of September, 1932, who says in part: "In spite of their stubborn nature and frequent recurrences, they do not seem to become chronic."

ETIOLOGIC FACTORS

These and other peculiarities led us to the belief that there were factors of importance in the etiology which had not been discovered, with the result that from certain observations in a comprehensive series of cases, a partial solution has been evolved which undoubtedly explains some of the puzzling aspects of this condition.

The present consensus of opinion as to etiology is reflected in the survey made by Reed,[2] and reported in the *New Orleans Medical and Surgical Journal,* in December, 1923. This was abstracted in the *Year Book of Urology,* in 1924 (Cunningham[3]), the theory being that gonorrheal infection produces changes in the lower genital tract with a consequent lowering of resistance, thus permitting organisms usually harmless under ordinary conditions to become pathogenic.

Compilations of reports from various sources show that 45 per cent of bacterial nonspecific urethritis cases never had gonorrhea, and that 55 per cent had gonorrhea some years previously.

The cases which had no gonorrhea do not come under the classification of permanent urethral damage, and how the other group which had gonorrhea several years previously could have a persistently lowered urethral resistance and not show urethritis until years later, still remains unexplained. Obviously, in the face of these facts, another cause must be sought out and proved other than a purely bacterial theory, and also that other factors may be responsible in these cases.

Further reports of large series of cases indicate that organisms, such as the colon bacillus, staphylococcus, etc., are present in 90 per cent of all cases of nonspecific urethritis, and absent in only 10 per cent.

The question now arises as to why, if these bacteria have been present in the urethra for a long time, a urethritis should suddenly develop without warning or without any other cause or provocation. If, as has also been reported by many observers, most of these cases are bacterial in origin should there occur such a rapid cure, and in many instances a spontaneous one without eliminating the bacteria from the urethra?

Some of the etiologic factors believed responsible for the production of this disease have been mentioned here and abroad by McNally,[4] Hull,[5] Oelsner,[6] Pugh,[7] Chwalla,[8] and many others. These factors include prophylactic injections, infection under the foreskin, intra-urethral chancroid, intestinal disturbance, excessive masturbation, local urethral treatment, prolonged sexual abstinence, overindulgence or irregularities of sex practices, endo-urethral chancres, trichomonas vaginalis, chronically inflamed urethral crypts or glands of Littre, phosphaturia, oxaluria, defecation prostatorrhea, impairment of drainage, with stricture and local mucosal erosions.

PREDISPOSING FACTORS

In a little less than 50 per cent of all cases, one or more of the above predisposing factors have been found present, but in slightly more than 50 per cent none of these factors have been found. It is, therefore, assumed that there could have been no known factor to remove, and in view of the prevalent opinion that the principle of treatment of nonspecific urethritis consists in removing the cause, it can be seen where the difficulty has been in trying to cure these cases because of such a limited knowledge of the etiologic factors.

Bierhoff,[9] in the *Urological and Cutaneous Review* of July, 1934, rightly states that "all too frequently the physician contents himself with the mere treatment of symptoms along empirical lines; and although much has been written regarding numerous causative agents and forms of treatment, precise diagnoses have received but little attention."

Ellis[10] in the *Medical Journal of Australia,* August 2, 1924, states as his belief that, while gonorrhea is the most frequent predecessor to chronic

* Read before the Urology Section of the California Medical Association at the sixty-sixth annual session, Del Monte, May 2–6, 1937.

urethritis, some cases are not preceded by gonorrhea.

The influence of certain irritants has been recognized, and their elimination has had a beneficial effect on the course of the disease. As a consequence, the same precautions and eliminations have been applied in every case. A blanket indiscriminate suspicion has been cast upon all so-called irritants such as alcohol, highly seasoned and spiced foods, sweets, acids, condiments, etc., the indulgence in which seemed to have aggravated the symptoms of the urethritis.

The consensus of opinion at the present time, in so far as treatment is concerned, is that adjuncts in promoting a cure are to be found in restrictions of such irritating factors as generally mentioned above; but in not a single instance has any attempt been made to isolate these separate items into possible single specific etiologic factors.

RÔLE OF FOODS

In a detailed analysis of all of the various irritating factors, the elimination of which seemed to temporarily or permanently arrest the symptoms of nonspecific urethritis, it was discovered that the patients periodically indulged in excesses of certain kinds of foods or drinks. Occasionally the patient would notice and report that when he indulged in a particular type of excess, the urethral discharge would appear.

This led to the testing out of these cases along these lines. When a patient presented himself with a urethral discharge, the gonococcus was eliminated first as a specific factor, then the prostate was eliminated for infection, the urethra for strictures as well as all other possible complicating pathologic factors. Having thus established the existence of an uncomplicated nonspecific urethritis with purulent or mucoid discharge, with or without bacteria such as colon bacillus, staphylococcus, etc., the patient received no local nor constitutional treatment. He was, however, instructed to keep a very accurate detailed record of everything he ate or drank for meals or between meals, and not to change any of his habits in this respect.

A week's compilation of his diet, in conjunction with the daily record of his discharge, was then studied, special notation being made of all similar articles of food or drink, except water, that appeared repeatedly every day. These were all eliminated from the diet and usually, in uncomplicated cases, the discharge disappeared in from one to two days and the patient apparently recovered without any additional treatment. In most instances there was more than one article of food or drink eliminated. In these cases, after the discharge had disappeared for at least one week, one of the forbidden articles was added to the diet for daily consumption. In each instance when the particular article was added to the diet for which this individual had a specific sensitization, the urethritis would reappear in from one to three days. After again removing this offending article from the diet, there was again a spontaneous recovery from the urethritis. The remaining articles were then added to the diet, one at a time, and they usually showed no untoward effect upon the urethritis. Occasionally a case was picked up that showed a specific sensitization for two or more things.

During the analysis of a series of 120 cases there have been some cases of recurrence of the urethritis. In almost every instance of this kind, where a specific sensitization had been found, the history of the patient disclosed a careless reindulgence in the article of food or drink for which he had been specifically susceptible and had been cautioned against in the first place.

This was a particularly significant observation, as well as the persistent regularity with which the urethritis could be reproduced experimentally by giving the patient the particular food or drink for which he was found sensitive. This unquestionably would explain the previously unaccountable recurrences that have been repeatedly reported by other observers, as well as the irregularity of the discharge, from day to day, without regard to the intensity of local treatment, and also the fact that (Barbillon) in spite of their stubborn nature and recurrences, they do not seem to become chronic and many of the other heretofore idiopathic and unexplained peculiarities.

These observations are not without precedent in other fields of pathology, and may by the same token be accepted as logical and responsible for the direct production of nonspecific urethritis. Noteworthy parallels of food sensitization may be found in the production of asthma and some of its kindred respiratory affections, as well as in some of the acute and chronic skin lesions and urinary tract disturbances.

In this connection, allergy-producing symptoms in the urinary tract have been reported by Rowe[11] in his book on "Food Allergy," published in 1931, in which he mentions certain specific food factors such as eggs, onions, wheat, barley, oats, rice, coffee, lettuce, etc., producing bladder symptoms such as dysuria, tenesmus, and continuous pain over the bladder, with little or no demonstrable pathology.

Rowe states that the fact that bladder allergy can exist is substantiated by the use of the allergic reaction in the bladder musculature in the experimental animal by Manwaring and Marino.

Duke,[12] in the *New York Medical Journal,* November 1, 1922, states that: "In patients that have frequent and painful urination, the severity of symptoms is frequently out of all proportion to the lesions found after careful examination. In cases of this sort bladder symptoms are frequently the result, I believe, of the ingestion of foods to which the patient is sensitive."

FOOD SENSITIZATION TESTS

Because of failure of specific skin reactions to foods by the cutaneous method in these cases, results were obtained after trial diet elimination along the same lines as were adopted in the present series of cases of urethritis. Duke has found that cutaneous tests, while useful in air-carried allergins, fail in the bladder cases, and recommends the intracutaneous method.

The specific food sensitizations discovered in this series by the trial diet elimination process, were corroborated in many instances by obtaining a positive intradermal reaction to the same factor that produced the urethritis.

The correlation of skin and urethral allergy was found in a case in this series in a man thirty years old, who had indulged in one to three eggs two to three times daily for a period of three weeks. At the end of this time a nonspecific urethritis appeared, accompanied by an urticaria. He gave a history of previous similar attacks of urticaria following overindulgence in eggs, and knew that he had such a sensitization. This was the first time, however, that it was accompanied by an acute urethritis. After removing eggs from his diet, the urethritis, in three days, entirely disappeared and the urticaria subsided after two weeks.

Although the liquors and some of the foods have been isolated into separate individual sensitizations, such as gin, Bourbon whisky, certain types of wine, orange juice, oysters, tea, Spanish tamales, tomato juice, etc., the general classification of highly spiced foods and sweets have thus far been considered as a whole in this series, and not segregated except in a few instances. It will be the purpose of further observations to study and possibly segregate the various types of sweets and spices, or spicy foods, into separate factors of sensitization, in order not to create a permanent hardship upon an individual if he should be sensitive to chocolate and not other forms of sweets such as puddings, cakes, pies, ice cream, etc., or if he should be sensitive to spicy or peppery meats, bologna, etc., and not be affected by salty foods such as herring, sardines, or even spaghetti sauce or relish, etc.

The importance of determining and segregating these individual food factors can be seen from the experiments with alcoholic beverages. In almost every instance of sensitization for alcoholic beverages, it was found that the individual was sensitive to only one type of liquor. When this type was discovered, addition of other forms of liquor produced no harmful effects and had no tendency to reproduce the urethritis.

A word picture of typical cases of specific food and drink sensitization may be seen in the following cases:

REPORT OF CASES

Case 1.—S. DeG., male, age forty-two, single, uncomplicated gonorrhea eight years, previously cured in three weeks, recurrent mild attacks of hay fever and asthma for the past fourteen years; no other illnesses nor operations; present illness commenced two days ago with profuse continuous thick yellow purulent urethral discharge; history of exposure ten days before. Examination revealed an uncomplicated, acute nonspecific urethritis. The patient was given no local treatment, but instructed to return in one week with a list of everything he ate and drank, and especially cautioned not to refrain from anything he had been doing in the past two weeks.

Upon his return he reported that the discharge had been continuous and very profuse. After inspecting his diet list for the week, the one item of tomato juice stood out so prominently and reappeared so consistently day after day as the only persistently overindulged in article consumed that one could almost with certainty pick it out as the probable specific factor. Nothing else was eliminated from the diet. Twenty-four hours later the patient called up to report that the discharge had diminished very appreciably. At the end of three days, examination showed no evidence of discharge. Both glasses of urine, in a two-glass test, were clear and contained no pus.

The patient refrained from drinking tomato juice for a period of three weeks, during which time he received no treatment whatsoever and showed no evidence of urethritis. At the end of this period he was induced to try an experiment to corroborate the diagnosis. He resumed drinking tomato juice twice daily, and in twenty-four hours noticed a slight irritation at the meatus and some mucoid discharge which, at the end of forty-eight hours, became profuse and purulent and showed a fully developed urethritis exactly as he had had originally. He immediately discontinued drinking the tomato juice, and the urethritis again spontaneously cleared up. He has since refrained from drinking tomato juice or eating tomatoes, and has had no recurrence of the urethritis.

* * *

Case 2.—Dr. H. S., male, age thirty, married, no history of gonorrhea, thin undernourished man of small stature, history of several attacks of acute pyelitis, which have cleared up entirely. X-ray pictures showed a reduplication of the right ureter and renal pelvis, with no evidence of hydronephrosis, no other illnesses nor operations, no history of exposure to infection.

The patient appeared, complaining of a profuse purulent urethral discharge for the past two days. A diagnosis of acute nonbacterial nonspecific urethritis was made after all other pathology was excluded. The patient was told to record his diet and return in one week.

In questioning this patient as to any change in his diet for the past two or three weeks, he volunteered the information that he had been trying to gain some weight and had, therefore, recently increased his carbohydrate intake in the form of an addition of ovaltine daily as well as ice cream and chocolate. After eliminating these three things, the urethritis disappeared entirely. In two days he was free of symptoms. He was subsequently allowed occasional portions of vanilla ice cream, but the addition of chocolate or ovaltine immediately precipitated an attack of urethritis.

During the first week's period of recording the diet in this case it was observed that on one of the two mornings following the evening upon which he did not take the ovaltine, but had eaten ice cream or chocolate, the discharge had lessened somewhat temporarily, showing the probability of a greater sensitization for ovaltine on his part than for either ice cream or chocolate, which proved to be the case on testing him out later after the sensitization was established.

* * *

Case 3.—M. G., male, thirty-nine years old, with a history of several previous attacks of gonorrhea, heavy eater and drinker—four to eight Bourbon or Scotch whiskies daily, also drank wine and cordials, indulged in all sorts of excesses of highly spiced foods and sweets.

Despite all of these irritants, it was discovered, after a long process of elimination, that the only specific factor in this case was shell food. His diet included one or two crabs, two dozen oysters, broiled lobster, shrimps, or steamed clams daily. After this was established, it was found that the addition of any one of these sea foods produced a urethritis, the elimination of which brought about a spontaneous cure. After the elimination of these sea foods, the patient contined to indulge in excesses of foods and liquors of all other varieties, but showed no ill effect, in so far as any recurrence of the urethritis was concerned.

* * *

Case 4.—R. M., male, case of nonbacterial urethritis, with a spontaneous cure, in a Frenchman, thirty-two years old, who had recently come to this country from France. He had hardly ever tasted orange juice in his native land because of its prohibitive cost. Soon after he arrived in California he drank large quantities of orange juice and ate grapefruit daily, the elimination of which produced immediate results in the cessation of the urethral discharge and the disappearance of his symptoms.

TABLE 1

Specific Factor	No. of Cases	Percentage
Sweets (candy, chocolate, pie, pastry, cake, ice cream, ovaltine, malted milk)	54	45.0
Whisky (mostly raw young Bourbon whisky)	8	6.66
Tequila	1	0.83
Beer	4	3.33
Wine	2	1.66
Orange juice	4	3.33
Liquors	1	0.83
Seminal fluid	1	0.83
Shell fish (crabs, clams, shrimps, oysters, lobsters)	3	2.5
Lemonade	1	0.83
Gin	11	9.16
Tomato juice	4	3.33
Tea (English breakfast, strong)	2	1.66
Spanish tamales	1	0.83
Spices (spaghetti sauce, bell peppers, relish, herring, spiced meats)	10	8.33
Eggs	1	0.83
Cases with no specific factor	12	10.0
Total	120	99.94

COMMENT

In one case, attacks of acute urethritis developed immediately after intercourse. These were subsequently prevented by irrigating the anterior urethra with a weak solution of potassium permanganate immediately following intercourse.

It has been found that normal sexual intercourse does not affect the course of a nonspecific urethritis, but that abstinence may aggravate the condition by increasing the discharge because of the well-known irritating effect of seminal fluid on the urethral mucosa. With abstinence, there is apt to be seminal fluid in the urethra constantly because of an overflow from excess of retained seminal fluid.

It is not the intention of this report to convey the impression that all of the 120 cases in this series were readily and completely and spontaneously cured by the simple process of elimination of a specific offending factor after it had been determined. This was accomplished only in the uncomplicated acute primary or recurrent type of case of which there were sixty-six in number. Neither is it the purpose of this discussion to detract from attention to and treatment directed toward the correction of complicating local pathology, which may also cause or contribute toward the production of this disease such as cystitis, prostatitis, ulcerations of the urethra, urethral strictures or cysts, etc., of which there were fifty-four in the series.

After treatment of complicated cases with the various methods such as prostatic massage, urethral dilatation, instillation, irrigation, fulguration, etc., depending on the complication found, it was noticed that in almost every instance, as soon as a specific sensitization for any particular food or drink was discovered and this offending factor removed from the diet, most of the cases showed an appreciable diminution in the amount and virulence of the urethral discharge, and an occasional case was entirely cleared up. This led to the deduction that even in complicated cases of this kind there may also be a specific food etiologic factor complicating the situation, the removal of which will benefit the patient and increase the possibility of ultimate cure.

Table 1 presents a tabulation of 120 cases of nonspecific urethritis, either simple or acute, or accompanied by other complicating genital pathology with enumeration and percentage of each of the various specific food and drink factors found in this series.

CONCLUSIONS

1. The production of a nonspecific urethritis is not dependent upon a previously existing gonorrhea.

2. Peculiarities of this condition, such as spontaneous recovery, absence of chronicity, frequent recurrences, different types of discharge, irregularity in clinical course irrespective of treatment, and many others, find their logical explanation in the discovery of certain individual specific food and drink factors.

3. Indulgence by an individual in a food or drink for which he has a specific sensitization may produce a urethritis.

4. Elimination of one or more foods or drinks to which an individual is sensitive and from which he has acquired a urethritis, will bring about a spontaneous cure in uncomplicated cases, and a recession of the discharge and an improvement in the symptoms in cases with complications.

5. Sweets apparently far outnumber all other articles of food as specific factors of sensitization in the production of this disease.

6. A small percentage of cases either do not fit into the theory of specific sensitization or, if they do, have remained as yet undiscoverable.

7. Ninety per cent of the cases not due to factors here classified as complications, namely, trichomonas vaginalis, urethral strictures, venereal prophylaxis, endo-urethral chancres, etc., are directly due to and caused by a specific food sensitization.

8. Similarity of specific food sensitization in urethritis to asthma, urticaria, bladder and kidney allergy, etc.

1052 West Sixth Street.

REFERENCES

1. Barbillon: Journal D'Urologie, September, 1932.
2. Reed: New Orleans Med. Journal, December, 1923.
3. Cunningham: Year Book of Urology, 1924.
4. McNally: Ill. Med. Journal, June, 1934.
5. Hull: Jour. Mich. State Med. Soc., January, 1937.
6. Oelsner: Dermatologische Wochenschrift, November, 1935.
7. Pugh: Amer. Med., August, 1935.
8. Chwalla: Archiv. Dermatologie und Syph., September, 1930.
9. Bierhoff: Urol. and Cut. Rev., July, 1934.
10. Ellis: Med. Journal of Australia, August 2, 1924.
11. Rowe: Food Allergy, 1931.
12. Duke: New York Med. Journal and Med. Record, November 1, 1922.

DISCUSSION

LOUIS CLIVE JACOBS, M.D. (450 Sutter Street, San Francisco).—Nonspecific urethritis is particularly interesting to urologists because of its diverse etiology, the persistence of discharge, and the difficulties encountered in producing a permanent cure. At some time or other, all of us have had our ingenuities taxed in the treatment of this condition.

It is manifest that numerous underlying causes are productive of urethritis. The male urethra is a highly sensitive organ lined with a delicate mucous membrane, and consequently is prone to inflammatory reactions.

Doctor Steinberg in this thesis describes many of these causes which result in urethral discharge. He has demonstrated that urethritis may be of allergic etiology, and hence this disease, which was formerly thought to be purely etiologically provincial in character, may be due to generalized causative factors. He reports a series of 120 patients in whom a close survey of the diet was made, so that many, by the elimination of sensitizing foods, recovered. By this means he has proved that the competent urologist must be conversant with the principles and practices of general medicine, and must approach his problems from the viewpoint of the internist, as well as from that of the urologic specialist.

It is only in recent years that various urological problems, such as bladder pain, frequency, and nephralgias, have been described on the basis of allergic etiology. With this in mind, it behooves the urologist to learn some of the facts of allergy. Research investigations and reports have been meager. Hence our opinions must necessarily be founded upon clinical data, similar to that presented by Doctor Steinberg in his manuscript.

The relationship as demonstrated between ingested food and the urethral reaction is of extreme clinical significance. We have all long known that certain individuals have idiosyncrasies toward certain foods, but in the past the investigations did not follow the routine as outlined by the essayist.

It was in 1864 that Dr. Henry Salter drew the attention of the medical world to the fact that certain foods, which are nonirritating to the ordinary individual, produced asthmatic paroxysms in some few patients. He described this as a hypersensitiveness on the part of the person to certain foods. This was the forerunner of more scientific investigations, and has eventuated in the modern study of allergy.

A review of the literature, including such authors as Doctors Duke, Rowe, and Dray, would lead one to believe that there are allergic etiological factors present which can produce a urethritis in some patients. Nevertheless, one cannot disassociate the idea of chemical irritants being eliminated through the urethra as a result of metabolic processes taking place within the body during the digestion of food products. Nor can one disregard the idea that metabolism plays a prominent part in individuals with a gouty diathesis, and is responsible frequently for a nonspecific urethritis.

I believe that we urologists should undertake further investigations of the reactions of our patients to certain foods. The knowledge thus obtained, with that submitted by Doctor Steinberg, would in the future give a more comprehensive understanding of this particular subject.

*

ROBERT V. DAY, M.D. (1911 Wilshire Boulevard, Los Angeles).—The perusal of the paper by Doctor Steinberg is very intriguing, for there is no question but that allergic affections of the urethra is a very important subject in no way to be brushed aside.

Nonspecific urethritis is not at all uncommon. It often originates from previous inflammatory damage to the urethra and occasionally from descending infections, and I think, rarely, as a manifestation of an allergic state. A very common cause is oft-repeated prophylactic injections of Protargol solutions, and this type is quite resistant to treatment.

The incidence of allergic urethritis has been much less in my experience than in that of Doctor Steinberg's. Even when diagnosed we are often unable, in some instances, to do a lot for it. I have usually found, after due investigation, a pathologic basis for practically all cases of nonspecific urethritis. After the ordinary pathologic conditions have been discovered and cleared up, in such cases one may frequently find one or the other type of irritation hyperplasia in the posterior urethra, provided one examines with a Stern (water-dilating) urethroscope. Open-end urethroscopes, such as Koch's and others, are practically useless both in the anterior and posterior urethra. The air-dilating instrument of Gordon is occasionally useful in the anterior urethra. The McCarthy and Buerger cysturethroscopes provide excellent vision, but only a small circumference can be visualized in a field. The Buerger urethroscope and several others are too cumbersome, and it remained for Maximilian Stern to really reduce the water-dilating urethroscope to its ultimate simplicity. Through it one may obtain an excellent perspective view of the entire circumference of the urethra over its whole length, and a close-up gives ample detail. Any topical therapy indicated may be directed to the spot or spots after a precise diagnosis has been made.

It need not be employed except in a certain small percentage of cases of nonspecific urethritis or residual cases of specific urethritis.

*

BURNETT W. WRIGHT, M.D. (727 West Seventh Street, Los Angeles).—The author has rendered the profession a real service, not only by presenting his evidence of specific sensitization in the urethral mucosa, but also by outlining a simple means of utilizing this information in the individual case. The review of a written record of food and drink consumed for a week is a much simpler method of finding the sensitizing substance than either the extensive intradermal tests or the basic diet with daily addition of a single food, tests ordinarily employed to determine food allergy. The fact that this simpler procedure is effective will greatly facilitate and hasten the use of this new technique in the treatment of nonspecific urethritis by urologists generally.

When confronted by a case of nongonorrheal urethritis, it is good practice to inquire carefully into the dietary habits of the individual, and particularly into any dietary indiscretions just prior to the appearance of the discharge. During prohibition, the finger of suspicion frequently pointed to that almost forgotten beverage, "bathtub gin." It has been my feeling that in such cases the urethritis was secondary to intense irritation of the urethra by the unusual products of metabolism excreted in the urine, and that following such irritation the resistance of the urethra was so decreased that organisms of low virulence could establish an infection. The conception of allergy presented in this paper would account for the evident lowering of resistance by a different mechanism, but the treatment calls for withdrawal of the offending substance in either case, and for attention to the infection itself. In this latter regard, it may be well to remember the use of such time-honored remedies as irrigations with mercury oxycyanid to control the infection or hasten its demise after the resistance-lowering substance has been removed from the diet. It is well to remember, too, the figures quoted in this paper showing almost half of the cases complicated by cystitis, prostatitis, strictures, or other pathology requiring careful diagnosis and adequate treatment.

This presentation has helped to answer many of the puzzling problems concerning nonspecific urethritis, but it also raises some questions which will no doubt be the subject of further investigation. For instance, it is noteworthy that a few of the patients in this series exhibited some common allergic symptoms, such as urticaria or hay fever, but apparently the majority were not so afflicted. Why should the urethral mucosa be sensitive when other membranes are not? It would be interesting to know if the urethra is sensitive to the specific food as ingested or only to its metabolized end-products as excreted in the urine. If the latter is the case, it would help to explain the localization of allergic manifestations only to the areas touched by the urine. Now that attention has been called to this subject, additional evidence may be expected from the use of passive intradermal tests of specific sensitivity as well as from clinical experience developing in the practice of other physicians.

Nonspecific urethritis has long been an elusive subject hiding in a dark corner of urological science and avoiding many of the best-aimed darts of therapeutic endeavor.

ALEUKEMIC MYELOSIS (ALEUKEMIC LEUKEMIA)*

WITH SPECIAL REFERENCE TO THE CLINICAL SIGNIFICANCE OF THE MYELOBLAST— ANALYSIS OF TWENTY CASES

By STACY R. METTIER, M.D.
AND
KATHERINE PURVIANCE, A.B.
San Francisco

DISCUSSION *by A. G. Foord, M. D., Pasadena; James F. Rinehart, M. D., San Francisco.*

THE occurrence of immature leukocytes in the peripheral blood is a phenomenon which often occasions diagnostic difficulties. The bone marrow, by virtue of its labile nature, may release young polymorphonuclear leukocytes, occasional myelocytes and even myeloblasts for circulation during the course of infection,[1] when the marrow cavities are obliterated by osteosclerosis,[2,3] or following the invasion of blood formative tissue by tumor metastasis.[4] This reaction gives rise to clinical manifestations and changes in the blood picture similar to, and frequently confused with, those of true myeloid leukemia and aleukemic myelosis.

During the past five years we have examined many patients whose blood streams contained abnormal cells. It is our purpose to present the important clinical and laboratory data on a selected group of twenty cases of leukopenia and anemia, in which the presence of myeloblasts in the blood films were the determining factor in the differential diagnosis. These cases have been diagnosed as aleukemic myelosis.

IDENTITY OF THE MYELOBLAST AND LEUKOGENESIS

Criteria for the recognition of the myeloblast and its differentiation from other immature cells have accumulated slowly during the past three decades (Naegeli, Downey, Piney). By means of morphological, biological and tinctorial methods, and by the comparatively recent introduction of supravital staining technique, sufficient data have been obtained to establish this cell as a structural unit. Naegeli,[5] who, in 1900, was among the first to describe the myeloblast, used the Giemsa and oxydase stains in his studies. The Romanowsky stains, including Wright's modification, have come into general usage, and these bring out the characteristics of the cells in a similar manner.

The myeloblast is a cell varying in size from 11 to 18 micra. Generally, it is round and contains a narrow rim of cytoplasm stained deeply blue. In stained-film preparations, certain characteristics of the nucleus, which is large and eccentrically placed, distinguish the myeloblast from other cells. The chromatin is reddish purple and is collected in uniform clumps, giving the nucleus a fine-meshed or stippled appearance. Scattered throughout the nucleus are from two to eight small, round or oval areas of less intense pigmentation, usually pale blue, which may be designated as nucleoli. The cytoplasm, which borders a rather indefinite nuclear membrane, may take the stain less intensely, but there is not the sharply demarcated perinuclear halo characteristic of the lymphocyte. Rarely, the cytoplasm includes rod-like bodies which stain red with Wright's stain. These are the so-called Auer bodies.

The origin of the formed elements of the blood has been a controversial subject. It does not enter the scope of this paper to discuss the monophyletic (Domenici, Wiedenreich, Pappenheim) or polyphyletic (Ehrlich, Naegeli, Sabin) hypotheses concerning leukogenesis, but it is of practical importance to review the various stages of development of the leukocyte from the myeloblast to the adult form. According to the concept of Sabin,[6] the parent cells of granulocytes arise from reticular cells lining the sinusoids of the bone marrow, and from these differentiate into adult forms. In the intermediate stages there is the formation of myeloblasts which, through subsequent progressive nuclear lobulation and the cytoplasmic inclusion of granules, become myelocytes. In the circulation, the fully matured form of the granulocyte appears with a nucleus of two or more lobules joined by filamentous threads.

Normally, immature cells do not appear in the blood stream. However, with minimal stimulation of the bone marrow, many of the leukocytes show a tendency toward incomplete lobulation. With moderate to severe stimulation, a proportionately larger number of leukocytes fail to attain complete maturation, and a larger percentage of young cells appear in the differential formula. This is known as a "shift to the left," according to the Schilling[7] modification of the Arneth[8] method of classifying leukocytes. In sepsis, then, or any other disease process in which there is a marked degree of stimulation of the leukopoietic tissue, immature cells, including myeloblasts, may appear in the peripheral blood.

Clinically, it is important to keep in mind the identity of the myeloblast and the change which may take place in leukogenesis under abnormal circumstances, in order to evaluate properly the various blood pictures encountered. The data on the twenty case records presented below show in common the presence of immature cells in the circulating blood associated with leukopenia and anemia. Analyses of various laboratory procedures, combined with careful clinical studies, failed to reveal the presence of infection or malignant neoplastic processes which might be held accountable for the abnormal findings in the blood. Bone-marrow was removed at biopsy or at autopsy in ten of the twenty cases; and in the specimens obtained a reaction was evident which was consistent with a diagnosis of aleukemic leukemia.

INCIDENCE OF ALEUKEMIC MYELOSIS

There is relatively little to be found in the medical literature on the frequency of occurrence of aleukemic leukemia. In textbooks of medicine it

* From the Division of Medicine, University of California Medical School, San Francisco.
Supported by a grant from the Christine Breon Fund for Medical Research.
Read before the General Medicine Section of the California Medical Association at the sixty-sixth annual session, Del Monte, May 2–6, 1937.

TABLE I

CASE NUMBER	AGE	SEX	HEMOGLOBIN % GRAMS	R.B.C. IN MILLIONS	W.B.C PER Cu.MM	Pmn * F-NF	Pms	Pmb	Lymphocyte	Monocyte	Myelocyte	Myeloblast	Nucleated R.B.C. per 100 Wbc	Platelets	CLINICAL MANIFESTATIONS	BIOPSY OF STERNAL MARROW	AUTOPSY DIAGNOSIS
TB 1	38	M															
1ST BLOOD COUNT			53-7.7	3.27	2300	7-22			46	26	1	2	2	40000	TEMPERATURE-36.8—38.6 PURPURA-RETINAL HEMORRHAGES SPLEEN-NOT ENLARGED LYMPH NODES-NOT ENLARGED	HYPERPLASTIC MARROW CONSISTENT WITH MYELOID LEUKEMIA	ALEUKEMIC MYELOSIS
LAST "		10-24-33	10-1.4	0.50	980	8-26			16	12	20	16					
MT 2	26	F															
1ST BLOOD COUNT			37-4.7	2.08	1750	22-42			18	7	9	2	8	150,000	TEMPERATURE-37-38 PURPURA-GENERALIZED SPLEEN-GREATLY ENLARGED LYMPH NODES-MODERATELY ENLARGED		
LAST "		2-20-33	20-2.8	1.15	39.50	3-9			15	2	20	53	1	40,000			
JB 3	33	F															
1ST BLOOD COUNT			47-6.6	2.96	5150	50-23			18	9	0	0			TEMPERATURE 38.3 PURPURA-NONE SPLEEN-SLIGHTLY ENLARGED PRIOR TO DEATH LYMPH NODES-NOT ENLARGED		ALEUKEMIC LEUKEMIA.
LAST "		10-3-33	19-2.7	1.19	2750	39-36	1		14	3	3	2					
MC 4	47	M															
1ST BLOOD COUNT			84-3.4	0.87	3300	34-12			44	8			2	102	TEMPERATURE-37 PURPURA-NONE SPLEEN-NOT ENLARGED LYMPH NODES-NOT ENLARGED	HYPERPLASIA OF MARROW CONSISTENT WITH MYELOID LEUKEMIA	
LAST "		3-18-36	36-3.0	1.68	3000	34-14		2	32	2	2	14	60				
MC 5	49	M															
1ST BLOOD COUNT			70-9.8	2.91	3750	84-14	1		53	7		1	7	100,000	TEMPERATURE-37.4 PURPURA-NONE SPLEEN-NOT ENLARGED LYMPH NODES-NOT ENLARGED	HYPERPLASIA OF MARROW CONSISTENT WITH MYELOID LEUKEMIA	
LAST "		3-14-36	65-9.2	1.70	3600	1-14			35	3	17	30					
BW 6	41	F															
1ST BLOOD COUNT			58-7.3	2.08	5650	15-80	1		32	1	7	24	4		TEMPERATURE 37-38 PURPURA-GENERALIZED SPLEEN-MODERATELY ENLARGED LYMPH NODES-MODERATELY ENLARGED		
LAST "		2-10-32	36-3.9	1.45	3300	4-28			36	6	6	20	2				
MT 7	52	F															
1ST BLOOD COUNT			31-4.3	1.45	4500	26-28			18	12	15	1	4	120,000	TEMPERATURE-38 PURPURA-GENERALIZED SPLEEN-NOT ENLARGED LYMPH NODES-NOT ENLARGED		
LAST "		2-12-33	13-1.9	0.84	3550	26-49			14	9		2					
MT 8	46	M															
1ST BLOOD COUNT			15-2.2	0.90	3150	21-14		6	16	5	20	18	1		TEMPERATURE-40 PURPURA-GENERALIZED SPLEEN-NOT ENLARGED LYMPH NODES-NOT ENLARGED		
EF 9 **	54	F															
1ST BLOOD COUNT			58-8.1	3.64	2900	34-37		2	17	4	2	4		226,000	TEMPERATURE-37.4 PURPURA-GENERALIZED SPLEEN-MARKEDLY ENLARGED LYMPH NODES-SLIGHTLY ENLARGED		
LAST "		11-9-36	70-9.8	3.13	1650	33-21		2	19	15	5	3	1	60,000			

* ABBREVIATION FOR FILAMENTED AND NONFILAMENTED POLYMORPHONUCLEAR LEUCOCYTES
** PATIENT LIVING

Table 1.—The important clinical and laboratory data on nine patients with aleukemic myelosis and persistent leukopenia.

is stated that a rare form of leukemia without a leukemic blood picture does occur (Rosenthal and Harris[9]). Blakenhorn and Goldblatt[10] studied the records of the Lakeside Hospital in Cleveland and found that, of fifty-two cases of leukemia, diagnosed prior to December, 1920, six were reported to have had a normal leukocyte count at some time during the period they were under observation. King[11] reported fourteen cases without leukocytosis from a total of 105 cases of leukemia in the records of the Johns Hopkins Hospital prior to 1917. Neither Pinkerton[12] nor Baldridge,[13] in their excellent reports, mentioned the frequency with which leukemia without leukocytosis may occur.

During the five-year period between February, 1932, and February, 1937, in which this study was in progress at the University of California Hospital, thirty-four patients with myeloid leukemia were admitted to the wards. Of this number, fourteen were diagnosed as aleukemic leukemia, and represent two-thirds of the cases reported in our series; thus 40 per cent of the patients with leukemia entering the medical wards showed a low white blood-cell count. The remaining six patients were seen in the office and out-patient department.

AGE OF ONSET

Leukemia may occur at any age. The acute form of the disease appears with greater frequency during the third decade of life, whereas the chronic form is found more frequently during the latter part of the fourth decade.[9,14] With regard to aleukemic leukemia, an analysis of our series revealed that this diagnosis was made on two patients younger than twenty years of age; on four patients during the second and third decades; and on seven, or one-third of the patients, between forty and sixty years of age. It is to be noted in the tables that an aleukemic blood picture was found in four patients between fifty and sixty years of age, in two above sixty, and in one at seventy years of age.

TABLE II.

CASE NUMBER	AGE	SEX	HEMOGLOBIN % GRAMS	R.B.C. IN MILLIONS	W.B.C PER Cu.MM	Pmn * F-NF	Pms	Pmb	Lymphocyte	Monocyte	Myelocyte	Myeloblast	Nucleated R.B.C. Per 100 Wbc	Platelets	CLINICAL MANIFESTATIONS	BIOPSY	AUTOPSY DIAGNOSIS
EP 10	21	F															
1ST BLOOD COUNT			50-7.0	1.78	7600	39-1			45	3	4	8	1		TEMPERATURE-36.8-37.4 PURPURA-GENERALIZED SPLEEN-NOT ENLARGED LYMPH NODES-CERVICAL	MYELOID METAPLASIA OF LYMPH NODE	ALEUKEMIC LEUKEMIA
LAST "		3-3-32	40-6.4	1.16	1570	24-18	4		25	06	18	0	2	40,000			
FB 11	57	M															
1ST BLOOD COUNT			78-10.9	3.07	8850	42-21	8	2	17	4	5	3	37		TEMPERATURE-36-39 PURPURA-LEUKEMIA CUTIS SPLEEN-MODERATELY ENLARGED LYMPH NODES-NOT ENLARGED	LEUKEMIA CUTIS	MYELOID LEUKEMIA
LAST "		2-10-33	60-8.4	2.80	8500	36-24			20	8	4	0	16				
TE 12	40	F															
1ST BLOOD COUNT			10-1.4	0.71	9450	12-10			18			60			TEMPERATURE-38.4-38 PURPURA-GENERALIZED SPLEEN-SLIGHTLY ENLARGED LYMPH NODES-NOT ENLARGED		MYELOID LEUKEMIA
LAST "		4-20-34	25-3.3	0.99	7850	15-16			19			50					
TG 13	45	F															
1ST BLOOD COUNT			45-6.3	3.90	4400	46-20	2		12	8	8	4	2		TEMPERATURE-37.2 PURPURA-SLIGHT SPLEEN-MARKEDLY ENLARGED LYMPH NODES-NOT ENLARGED		MYELOID LEUKEMIA
LAST "		3-15-34	40-5.6	3.07	8300	33-36		1	16	6	4	2					

* ABBREVIATION FOR FILAMENTED AND NONFILAMENTED POLYMORPHONUCLEAR LEUCOCYTES

Table 2.—A group of four patients whose leukocytes varied between 6,000 and 9,000 cells per cubic millimeter.

TABLE III

CASE NUMBER	AGE	SEX	HEMOGLOBIN % GRAMS	R.B.C IN MILLIONS	W.B.C PER Cu MM	Pmn * F-NF	Pme	Pmb	Lymphocyte	Monocyte	Myelocyte	Myeloblast	Nucleated R.B.C per 100 W.bc	Platelets	CLINICAL MANIFESTATIONS	BIOPSY	AUTOPSY DIAGNOSIS
MM.14	61	F															
1st BLOOD COUNT			58-8.1	2.88	2,100	12-10			42	11	10	9	3		TEMPERATURE-36.5-41		
LAST "	"	1-24-37	37-7.9	2.07	42,000	0-1			7	7	73	10	4	65,000	PURPURA-GENERALIZED		
															SPLEEN NOT ENLARGED		
															LYMPH NODES-NOT ENLARGED		
L.M.15	18	M															
1st BLOOD COUNT		9-16-32	43-6.1	1.61	6100	6-13	1	1	47	1	16	15	3		TEMPERATURE-36.3		
LAST "	"	12-8-32	18-2.5	1.24	12,100	1-1			19	4	12	65			PURPURA-SLIGHT		
															SPLEEN-SLIGHTLY ENLARGED		
															LYMPH NODES-GENERALIZED ENLARGEMENT		
M.R.16	68	M															
1st BLOOD COUNT		12-2-36	88-3.9	1.18	1,250	16-20			44	4	4	12	2		TEMPERATURE-38-40	HYPERPLASTIC MARROW CONSISTENT WITH MYELOID LEUKEMIA	MYELOID LEUKEMIA.
LAST "	"	1-8-37	44-6.2	1.67	52,000	1-6			3	12	6	70	3	150,000	PURPURA-SLIGHT GENERALIZED		
															SPLEEN-NOT ENLARGED		
															LYMPH NODES-SLIGHT GENERALIZED ENLARGEMENT		
CH.17	3	F															
1st BLOOD COUNT		7-29-35	55-7.7	2.21	3,500										TEMPERATURE-38.1		
LAST "	"	9-11-35	51-7.1	2.53	30,000	3-4			13		38	42	1		PURPURA-NONE		
															SPLEEN SLIGHTLY ENLARGED		
															LYMPH NODES-SLIGHT GENERALIZED ENLARGEMENT		

*ABBREVIATION FOR FILAMENTED AND NON FILAMENTED POLYMORPHONUCLEAR LEUCOCYTES

Table 3.—Data on four patients who developed a terminal leukocytosis of from 12,000 to 52,000 cells per cubic millimeter following a prolonged leukopenia.

SEX DISTRIBUTION

From an examination of the tables it will be noted that twelve of the cases of aleukemic myelosis occurred in females and eight in males. This indicates an increased incidence in the female sex.

SYMPTOMS OF ALEUKEMIC MYELOSIS

The disease was observed to be insidious in its onset. The symptoms complained of most frequently were weakness and increasing ease of fatigability. Over a period of from a few weeks to months the symptoms became more marked, and the patients gradually developed pallor, associated with palpitation, dyspnea, and slight degrees of vertigo. During the course of illness, purpuric manifestations appeared in sixteen of the patients. These varied in intensity from a tendency to bruise easily, in the mild cases, to actual bleeding into the skin or mucous membranes in the more fulminating cases, and in patients who were approaching the terminal stage of illness. Three patients complained of loss of 12 to 25 pounds in body weight. The remaining patients stated that they had had slight loss of weight, but it was noted that all except one patient were in a fair state of nutrition. Accordingly, the patients did not show the cachectic appearance that is usually seen in association with prolonged infection or with neoplastic malignancy.

Fever was present in thirteen of the patients. The fluctuations in temperature varied from subnormal to a slight afternoon rise to 38 degrees centigrade, or to as high as 40 and 41 degrees centigrade. The temperatures recorded were found to be higher in the patients who showed a marked tendency to bleed.

The length of illness in the twenty patients varied considerably. In seven death occurred in four months or less after the onset of illness; nine lived from six months to one year; and four are still alive after a period of more than five years.

SPLEEN AND LYMPH NODES

A slight to moderate enlargement of the spleen occurred in eight of the patients, and in four patients the spleen was greatly enlarged. It is of interest to note that the largest spleens were found in the patients whose data are recorded in Table 4, and whose illness was chronic in duration. In the remaining eight cases there was no clinical evidence of hypertrophy of the spleen. The case records of five of these patients are being published elsewhere.[15]

The cervical lymph nodes were visibly enlarged in one patient, and in eight others there was a slight generalized lymphadenopathy.

HEMATOLOGIC ASPECTS OF ALEUKEMIC LEUKEMIA

Since aleukemic myelosis is primarily a disease of leukopoietic tissues, the twenty cases analyzed here have been divided into four groups, depending on the changes in the leukocyte levels during the course of the disease (Tables 1 to 4). The counts of erythrocytes and leukocytes, and the determination of the differential formulae were made by the authors. It is to be noted in Table 1 that in nine of the patients the highest leukocyte counts did not exceed 6,000 cells per cubic millimeters.

TABLE IV

CASE NUMBER	AGE	SEX	HEMOGLOBIN % GRAMS	R.B.C IN MILLIONS	W.B.C PER Cu MM	Pmn * F-NF	Pme	Pmb	Lymphocyte	Monocyte	Myelocyte	Myeloblast	Nucleated R.B.C per 100 W.bc	Platelets	CLINICAL MANIFESTATIONS	BIOPSY	AUTOPSY DIAGNOSIS
BU.18**	45	F															
1st BLOOD COUNT		9-7-31	70-9.8	4.05	5000	30-31	2		22	9	6				TEMPERATURE-36.5-37.5		
LAST "	"	11-16-36	80-11.2	4.11	20,800	54-13	1	8	6	2	13	1	1	280,000	PURPURA-SLIGHT		
															SPLEEN-MODERATELY ENLARGED		
															LYMPH NODES-NO ENLARGEMENT		
O.S. 19**	70	F															
1st BLOOD COUNT		8-7-31	80-11.2	5.79	5500	13-17	10		43		17				TEMPERATURE-36.5-37	HYPERPLASTIC MARROW CONSISTENT WITH MYELOID LEUKEMIA	
LAST "	"	2-1-35	61-11.3	4.71	30,400	14-31			21	1	6	7		210,000	PURPURA-GENERALIZED		
															SPLEEN-MARKEDLY ENLARGED		
															LYMPH NODES-SLIGHT GENERALIZED ENLARGEMENT		
M.D. 20**	31	M															
1st BLOOD COUNT		12-6-34	60-8.4	3.34	3,250	31-39	1	1	7	9	10	3	7		TEMPERATURE-37.4		
LAST "	"	12-24-36	70-9.8	3.60	13,400	10-34		1	17	9	16	12	21	160,000	PURPURA-SLIGHT		
															SPLEEN-MODERATELY ENLARGED		
															LYMPH NODES — NONE		

*ABBREVIATION FOR FILAMENTED AND NON FILAMENTED POLYMORPHONUCLEAR LEUCOCYTES.
** PATIENT LIVING

Table 4.—The data on the three patients with aleukemic myelosis recorded here showed transient leukocytosis during prolonged leukopenia.

In Table 2 are the data on four patients whose counts were between 6,000 and 9,000 white blood cells per cubic millimeter. The four patients whose data are recorded in Table 3, following a prolonged leukopenia, developed a terminal leukocytosis of from 12,000 to 52,000 cells per cubic millimeter. This shift in the leukocyte levels occurred within twenty-four hours in one patient, and within three weeks prior to death in the others. The three remaining patients in the last group (Table 4), who are still living, at one time or another during the course of illness showed a transient increase in the number of leukocytes in the peripheral blood from a leukopenic level to a leukocytosis of 30,000 cells or less per cubic millimeter. The lowest count recorded in any of the patients at any time was 980 white blood cells per cubic millimeter. Our cases, therefore, were characterized by leukopenia except when a transient increase in the number of cells or a terminal leukocytosis occurred.

The most distinguishing feature of the blood was the appearance of immature leukocytes in the stained film. Tables 1, 2, 3, and 4 show the total leukocyte counts in terms of per cent. In sixteen of the patients, at some time during the course of illness myeloblasts were present in excess of 4 per cent. The highest percentage recorded was 70; and the average for the entire group of patients was approximately 16 per cent. In addition, the numbers of myelocytes were moderately increased and averaged 9 per cent for the twenty patients. In four of the patients, the numbers of myeloblasts did not exceed 4 per cent in any of the leukocyte counts that were made. In eleven patients during the early course of illness, few or no myeloblasts were found. It is at this stage of illness that a diagnosis of the patient's illness may be most difficult to establish.

Nucleated red blood cells, including normoblasts and a few erythroblasts, were present in numbers of from 2 to 102 per 100 white blood cells on stained blood films.

With the exception of the three patients whose data are recorded in Table 4, a severe anemia was present in the remaining 17. The number of erythrocytes for the entire series varied from a high level of 5,790,000 to a low level of 700,000 cells per cubic millimeter. The reduction in hemoglobin content of the red blood cells was proportionately less than that of the number of erythrocytes, so that the color indices were approximately 1.0 to 1.5. There was rather wide variation in the size and shape of the red blood cells, as seen in the stained films of blood. Many large round and oval cells were present which were greater than 7.4 micra in diameter. These cells were uniformly stained throughout and were well filled with hemoglobin. Other red blood cells, less frequently seen, were smaller in size than normal, and among them microcytes could be definitely recognized. The anemia became progressively more pronounced in the patients whose data are recorded in Tables 1, 2, and 3. The rapidity of progression of the anemia was altered somewhat by the acuteness of the disease, the presence of purpuric manifestations and whether or not the patient had received transfusion of whole blood.

There was a slight to great reduction in the number of blood platelets in all of the patients. This was accompanied in sixteen of the patients by evidences of bleeding, such as retinal hemorrhages, oozing of blood from the gums, or the appearance of spontaneous hemorrhages in the skin. In a few patients large hemorrhages occurred, and there was protracted bleeding from the mucous membranes.

SUMMARY AND CONCLUSIONS

Clinical and laboratory data are presented on twenty patients whose blood films showed an abnormal number of myeloblasts. In these patients there were found a varying degree of splenomegaly, severe anemia, leukopenia, moderate to marked thrombocytopenia, and a hemorrhagic tendency. In ten of the cases reported, in which it was possible to examine the bone marrow either by biopsy of the sternum or at postmortem examination, myeloid hyperplasia was found consistent with leukemia. It is emphasized that the increase in number of myeloblasts was sufficient to be of diagnostic importance, and enabled the clinician in a high percentage of cases to make a diagnosis of aleukemic myelosis.

University of California Medical School.

REFERENCES

1. Krumbhaar, E. B.: Leukemoid Blood Pictures in Various Clinical Conditions, Am. J. Med. Sci., 172:519, 1926.
2. Mauros, A.: Aleukamische, besser "nichtleukemische" Myelose mit Osteosklerose, Folia haemat., 43:323, 1931.
3. Mettier, S. R., and Rusk, G. Y.: Fibrosis of the Bone Marrow (Myelofibrosis) Associated with a Leukemoid Blood Picture, Am. J. Path. (In press.)
4. Piney, A.: Leukocytes in Osteitis Deformans, J. Path. and Bact., 28:122, 1925.
5. Naegeli, O.: Ueber rotes Knochenmark and Myeloblasten, Deutsche med. Wchnschr., 26:287, 1900.
6. Cunningham, R., Sabin, F., and Doan, C.: The Development of Leukocytes, Lymphocytes, and Monocytes from a Specific Stem Cell in Adult Tissues. Carnegie Inst. of Washington. Contributions to Embryology, Vol. 16, No. 84, p. 227, 1925.
7. Schilling, V.: The Blood Picture. Translated by R. B. H. Gradwohl. St. Louis: C. V. Mosby Co., 1929.
8. Arneth, J.: Die Neutrophilen weissen Blutkoerperchen bei Infektionskrankheiten. Jena: G. Fisher, 1904.
9. Rosenthal, N., and Harris, W.: Leukemia, J. A. M. A., 104:702, 1935.
10. Blakenhorn, M. A., and Goldblatt, H.: Aleukemic Leukemia with Unusual Skin Manifestations, J. A. M. A., 76:583, 1921.
11. King, J. T., Jr.: Aleukocythemic Leukemia, Bull. Johns Hopkins Hosp., 28:114, 1917.
12. Pinkerton, H.: Aleukemic Leukemia and Atypical Leukemoid Conditions, Arch. Path., 7:567, 1929.
13. Baldridge, C. W., and Fowler, W. M.: Aleukemic Myelosis, Arch. Int. Med., 52:852, 1933.
14. Minot, G. R., Buckman, T. E., and Isaacs, Raphael: Chronic Myelogenous Leukemia, J. A. M. A., 82:1489, 1924.
15. Mettier, S. R., and Purviance, K.: Leukemia Without Leukocytosis (Aleukemic Myelosis) and Without Splenomegaly, Arch. Int. Med., 60:458, 1937.

DISCUSSION

A. G. Foord, M.D. (Huntington Memorial Hospital, Pasadena).—Of especial interest to me is the large percentage (40 per cent) of cases of acute myelogenous leukemia, which showed at one time or other leukopenia. It is particularly difficult for a pathologist to impress on his

clinical confrères that the patient is suffering from leukemia when the white count is less than normal. These cases of Doctor Mettier's will help to show that the disease is primarily one of the hematopoietic system, and that there may or may not be an outpouring of excess white blood corpuscles into the peripheral blood. Many of these patients are undiagnosed or are sent into the hospital as cases of purpura, Vincent's angina, or pernicious anemia, depending on the presenting symptom of either purpuric manifestations in the skin, ulceromembranous lesions in the mouth or throat, or a macrocytic anemia. As the authors have shown, the presence of a very few myeloblasts should make one highly suspicious of the disease, and further counts and bone-marrow biopsy, if necessary, should be taken. The marked degree of anemia produced by these cases has been a point of great importance in our laboratory, and particularly the rapid decrease in the amount of hemoglobin and red cells without obvious bleeding should make one suspicious of this disease. Doctor Mettier's figures show cases which have dropped profoundly in the period of a week or two.

In a review of the leukemias at the Los Angeles County General Hospital, Doctor Love recently found that more than half of the acute cases showed some ulceromembranous lesion in the mouth or throat. This phenomenon, associated with anemia, some fever, and sometimes purpura, should lead one to consider acute leukemia as a proper diagnosis. It has not been my experience to find the spleen enlarged in so large a proportion of cases as the authors report. In the more acute cases the spleen is practically never palpable, and the absence of splenomegaly should not detract from the diagnosis of leukemia.

❋

James F. Rinehart, M.D. (University of California Hospital, San Francisco).—Doctor Mettier has drawn our attention to a form of leukemia that has offered great difficulty in diagnosis. In any case of unexplained anemia, particularly when associated with a leukopenia, the diagnosis of an aleukemic myelosis must be given serious consideration. This is particularly true when purpuric manifestations are present. The great significance of primitive white blood cells or myeloblasts in the blood stream has been set forth. Identification of these elements requires painstaking study and familiarity with cytological details of blood cells. Although the diagnosis appears well supported in most of the cases, a larger series with complete necropsy examination is desirable.

SOCIAL SECURITY: IN RELATION TO THE PHYSICIAN*

By Wirt B. Dakin, M.D.
Los Angeles

NINETY-FIVE per cent of doctors at the age of sixty-five will either be dead or entirely dependent. Our relatives, friends, or charity are our chief security! National Social Security for the plumber or street sweeper provides old-age income or sick benefit. There is no such provision for us, except for the five per cent who have the proper form of insurance, income securities, or real estate.

What can we do to improve ourselves? My suggestions, in order of their importance, are:

1. Maintain and improve our own health.
2. Continue to improve our professional ability.
3. Invest in only United States Government or Canadian securities and life insurance.
4. Keep our expenses low and save as much as possible.

The first suggestion should be easy to accomplish. Being in a business for someone else's health should qualify us to care for ourselves. The second problem of improving professional ability is always foremost in our minds. By constantly watching the leading medical men in our country we should be sufficiently stimulated.

The third problem, *i. e.*, investments, is too big to be handled at this time and may perhaps be dealt with at a later date. Let us remember that even such low interest rates as Government securities and paid-up insurance will double your investment in seventeen to twenty years.

The fourth problem of saving the correct proportion of our net income is the largest fly in the doctor's ointment. Most of this paper will be devoted to this subject.

FIRST STEPS

The successful physician, as I see it, must proceed about as follows: First, acquire at least average proficiency and then find an opportunity to put this into use. It may be necessary to create the opportunity.

Every married doctor should provide well for his family. Monthly trust-fund insurance should be carried to continue this provision in case of our sudden or unexpected death. Sometimes even before the funeral the "sharks" are endeavoring to contact your widow. So it is unwise to leave all insurance benefits to be paid in a lump sum.

No doctor should borrow money unless, in advance of the loan, he is sure it can be paid when due. If possible, repay it slightly ahead of the due date, and always remind your creditor of your promptness. It gives you an excellent credit rating.

If at death you have accomplished all of this and have enough left to pay the final bills, I am sure you are entitled to at least a congratulatory epitaph.

FINANCIAL EFFICIENCY

Medicine would deteriorate if 100 per cent commercialized. However, a patient should not object to his doctor exhibiting average business ability. Indeed, the doctor himself is frequently an obstacle to his own financial efficiency. Management of our finances by average office help is usually attended by indifferent results.

More personal supervision or observation of our assistants and secretaries will usually improve public impressions and service.

COLLECTIONS

We are expected to pay our bills C. O. D. by the first, or not later than the tenth of the month. Why not? The merchant must pay the wholesaler the same way to get his discounts. Why won't the public think that way about our bills? In Los Angeles the Retail Merchants Credit Men's Association has been telling the public to "pay your doctor and dentist." That helps. But a well-trained secretary helps more by saying the right word pleasantly at the right time. Bills should always be sent out promptly on the first of the month. Any doctor bills not collected within ninety days are considered almost uncollectible by the experts in the collections office at the Retail Merchants Credit Men's Association.

Credit-rating information, similar to that obtained by our leading stores, should be secured from every new patient, and even old ones, if they have been away any length of time. There are ways

* Read before the Los Angeles Urological Society, December 7, 1937.

of getting reliable information without asking too many questions. When patients have appointments, this information may be obtained in advance.

LEGAL KNOWLEDGE

Of course, you should know the usual legal requirements of our profession. More technical knowledge we should leave entirely to a good attorney.

COÖPERATION WITH COLLEAGUES

Proper relationships with professional colleagues are very helpful. We should try to be good consultants. The days have long since passed when one's competitor's medicine was flung into the wastebasket.

PUBLIC RELATIONSHIP

Every doctor should give some thought and time to the problems of the community in which he resides. Of course, the too effusive "glad-hander" with the personality plus, will eventually pass out of the picture unless he has real medical ability. Nevertheless, if more of our competent leading physicians were in politics it would benefit our profession. They could better decide how health should be cared for and by whom.

To some members of the laity too much business or political ability exhibited by the doctor is considered knowledge unbecoming a professional man. Again, we must avoid the extremes.

MORE AND BETTER PATIENTS

Better patients are what we want, but, like sporty trout, they are more difficult to land. They are more observing than we realize. While waiting for the doctor they see the office, the nurse, hear telephone conversations and, in advance of our arrival, form opinions as to our success, efficiency, friendliness, and cleanliness. We should have our office inspected once a year by a competent interior decorator, and occasionally ask intelligent patients if they can suggest anything to improve our office and service.

When all has been said and done the patient still believes his illness is the most interesting and important matter in our office. I have been interrupted while speaking with a patient on topics of the day with, "That's interesting, Doctor, but how about my condition?"

Dignity, quiet, and guarded conversation should prevail in our office. We should be careful about expressing any sort of an opinion concerning a patient even with our most confidential assistant. Office telephone conversations overhead by the wrong person can cause us to lose money, possibly a patient, and even damage suits have resulted.

I believe that early in the career of every graduate nurse or doctor, he should be seriously ill and even operated upon. It is a great experience. It makes a difference whose horse is being gored in the bullfight.

REDUCING OVERHEAD

The Turks have an old proverb, "The world belongs to the dissatisfied." We should carefully examine our expense account each month. We must first educate ourselves to get along with less of everything. For instance, study the subdivision of our floor space and the elimination of unnecessary equipment. Necessary accessories should be kept in cabinets and off the floor. The floor should be reserved for the feet of the doctor, his patient, and the treatment table.

After we have decided on an efficient subdivision of floor space, a good carpenter can build to our order instrument and supply cabinets that will enable us to reduce our rent from 25 to 50 per cent. The workrooms we must personally supervise, but the remainder should be carefully considered by the best interior decorator that can be hired. Furniture can be built to fit our new and smaller rooms. Properly selected color schemes, with the finishing touches, will disguise the fact that we have a small office. In six to eight months we shall save enough on rent to pay for all the expense of remodeling; after that we can buy an additional baby bond every month.

A poorly arranged, inefficient office, with unsuitable help, makes work more tiresome, less remunerative, and is a distinct barrier to our best intentions and success. An office should operate smoothly; no apparent hurry, hesitance, or criticism of assistants in the presence of patients.

PERSONAL EFFICIENCY

There is no substitute for personal efficiency. The degree of perfection attained will depend on our natural inclination and correct early training by intelligent parents and teachers. Keep an efficient office and your office will keep you.

A doctor should keep his appointments. He should remember that dictators have disproved the fallacy that "The king can do no wrong."

The fewer business interests you have outside of medicine the better. Business worries or uncertainties will affect the quality of your work as a physician. The observing patient soon senses these things.

PUBLIC SPEAKING AND WRITING

There is more rapid and satisfactory progress, especially for the younger doctor, if he can speak in public and write acceptably. It sometimes happens, though, that the man with speaking ability has nothing to say and is always saying it.

For those lacking speaking and writing ability I would advise a special course for adults, accompanied with persistent practice and serious effort. Age is no barrier. Lack of urge is.

Nothing creates a more unfavorable impression upon discriminating persons than a poorly composed letter on carelessly printed, cheap stationery. A good secretary or nurse should continually endeavor to improve her ability.

OUR ASSISTANTS

Henry Ford said, "Brains are cheap and I can hire all I need." That may be so. Much can be learned by visiting the offices of our successful colleagues, both at home and in other cities. Whomever we have in our reception room is about the most important person we employ. Her qualifications in order of value are: friendliness, diplomacy, and cleanliness. The streamlined blond is not essential or, I believe, desirable. After all, we are not trying to perfect a movie set.

We should encourage our associates to have initiative. They will soon be able to make suggestions of real value, which the tired doctor will appreciate. Such a highly qualified assistant can increase our income. A good salary, plus a commission, given to an ambitious, intelligent assistant, will get the best results.

The most successful people in all walks of life are those with vision and imagination. Such an individual can help us not only by action but even do some of our thinking.

Finally, at the end of our career I can think of no better way to view our past experiences than to quote the great scientist, T. B. S. Haldane: "I am glad I lived when I did. It was a great show."

802 Pacific Mutual Building.

HEALTH SERVICE PLAN OF MUNICIPAL EMPLOYEES OF SAN FRANCISCO*

OPINION OF THE SUPREME COURT OF THE STATE OF CALIFORNIA

Opinion Handed Down on September 2, 1938

S. F. No. 16017. In Bank. September 2, 1938

Charles T. Butterworth, Thomas F. Gilligan, William P. Juzix, John Kane, Cameron H. King, Mary Maude Murphy, Martin F. Wormuth, Edwin R. Zion, and James L. Quigley, Chairman, as Members of and Constituting the Health Service Board of the City and County of San Francisco, Petitioners, vs. Harold J. Boyd, as Controller of the City and County of San Francisco, and Duncan Matheson, as Treasurer of the City and County of San Francisco, Respondents.

For Petitioners—Cushing & Cushing, Ben C. Duniway.

Amicus Curiae—William P. O'Brien.

For Respondents—John J. O'Toole, City Attorney; Thomas P. Slevin, Deputy City Attorney.

For Respondent Harold J. Boyd—Frank L. Fenton, of Counsel.

Amici Curiae—Joseph McInerney, Vladimir Vucinich, Charles H. Brennan, O'Brien, Dibert & Acton; Lillian M. Wolletz.

For Board of Medical Examiners—U. S. Webb, Attorney-General; Lionel Browne, Deputy Attorney-General.

For Samuel L. Carpenter, Jr., Insurance Commissioner—U. S. Webb, Attorney-General; Neil Cunningham, Deputy Attorney-General.

BY THE COURT

This is a petition for a writ of mandate to compel respondents, the controller and treasurer of the city and county of San Francisco, to make available to petitioners certain funds deducted from the compensation of employees and teachers in San Francisco under the Health Service System established by charter amendment in 1937.

The proposal to establish a system of health service for city employees, upon payment of small, fixed monthly sums, was first submitted to a referendum vote of such employees, who declared themselves in favor of it by a vote of 7428 to 939. Thereafter the charter amendment was submitted to the electorate by the Board of Supervisors, and upon approval by vote of the people, became effective by concurrent resolution of the legislature on April 14, 1937. (Stats. 1937, p. 2782.)

* * *

The amendment adds Section 172.1 to the charter of the city and county of San Francisco. Its chief provisions are as follows:

1. A "health service system" for municipal employees is established, to be administered by a "Health Service Board." The Board consists of nine members, elected by members of the system for three-year terms at elections supervised by the registrar of voters. Each Board member gives a $10,000 bond, the premium being paid from funds of the system. (Subds. 1, 2.)

2. The "members of the system" are (1) all employees of the city and county who are members of the retirement system, and (2) all teachers and employees of the Board of Education who are members of the retirement system. Exemptions, however, are permitted as follows: (1) "Any employee who adheres to the faith or teachings of any recognized religious sect, denomination or organization and, in accordance with its creed, tenets or principles, depends for healing upon prayer in the practice of religion shall be exempted from the system upon filing annually with the Health Service Board an affidavit stating such adherence and dependence and disclaiming any benefits under the system." (2) The Board "shall have the power to exempt" any person whose annual compensation exceeds $4,500, and (3) any person "who has otherwise provided for adequate medical care." For the purposes of the first election, all employees eligible for membership are deemed members. (Subds. 1, 2.)

3. The Board has power, by a two-thirds vote of its members, "to adopt a plan or plans for rendering medical care to the members of the system, or for the indemnification of the costs of said care, or for obtaining and carrying insurance against such costs." The Board is further empowered to put the said plans into effect and administer them; to make rules and regulations for transaction of its business, granting of exemptions, and admission to the system of members; and to appoint and fix the compensation of a secretary and other employees, to hold office at the pleasure of the Board. (Subd. 3.)

4. The Board has power "to make provision for the participation in the benefits of the system by the dependents of members, retired municipal employees and tempo-

---

* Two newspaper items, which follow, give information concerning the background of the case at issue:

San Francisco Health System Upheld

The California State Supreme Court yesterday upheld the legality of the health service system established by San Francisco municipal employees by a 1937 amendment to the city charter.

The system has been in operation since March 15, with each employee paying $2.50 per month for membership.

The ruling was asked when Controller Boyd and City Treasurer Matheson refused to make the funds available until legality of the system was tested. . . .

* * *

High Court O. K.'s City Health Plan

Also Lauds Group Medicine

The State Supreme Court yesterday upheld the health service plan of San Francisco municipal employees and, in a companion decision, had warm words to say for group medicine.

With only one justice dissenting, the court ruled the San Francisco plan legal and ordered Controller Harold J. Boyd and Treasurer Duncan Matheson to make available to the board administering it $35,000 impounded pending the court's decision.

"There being no valid objection to the system," said the court, "it follows the city officials must perform the duties imposed on them and make the funds collected available to the board.

Validity Paramount

"The courts are not concerned with the policy or laws but only with their validity. In our opinion, the legislation violates no constitutional guarantee. There can be no question of the power of the city to establish a system of medical care for its employees or their dependents."

In passing, the court referred to the San Francisco plan as a good example of how group medical care can successfully be obtained. Of arguments that the system is unconstitutional because it compels deductions from employees pay, the court said:

No Vested Interest

"No one has a vested interest in public employment except under terms fixed by law. One of the terms of employment in this case is a provision for the health service plan."

Justice Douglas L. Edmonds, dissenting, called the plan "simply social health insurance for a restricted number of individuals who are compelled to participate."

The health service plan was authorized by the voters last year. Under its terms, $2.50 a month is deducted from the pay of 11,000 city employees, additional sums for dependents. High-salaried officials and employees with religious objections are exempted. All others must participate.

The monthly payment entitles participants to medical care from any physician on the health board's panel, under the general supervision of Dr. Walter B. Coffey, medical director for the board. Any physician may join the panel upon agreement to accept fixed fees for various medical services established by the board.

Editor's Note.—Asterisks and florets are insertions by the editor.

See also editorial comment on page 253.

rary municipal employees, provided that such participation shall be without cost to the city and county." (Subd. 3.)

5. The Board "shall determine and certify to the controller" the monthly sum to be paid by members of the system into its fund, and the controller "shall deduct said sums from the compensation of the members" and deposit them with the treasurer of the city and county to the credit and for the use of the system. "Such deductions shall not be deemed to be a reduction of compensation under any provision of this charter." The Board has control over the administration and investment of the funds, provided that all investments "shall be of the character legal for insurance companies in California." Disbursements may be made only upon audit by the controller, who exercises the same accounting and auditing powers as the charter gives him over other municipal boards, officers, and commissioners. (Subd. 4.)

6. "Members of the system shall have and possess no claim or recourse against any of the funds of the municipality by virtue of the adoption or operation of any plan for rendering medical care, indemnifying costs of said care or carrying insurance against such costs, but the claim and recourse of any such member shall be limited solely to the funds of the system. All expenses of the system shall be borne exclusively by the funds of the system and the city and county shall not appropriate or contribute funds in any manner for the purposes of the system hereby established and provided." (Subd. 6.)

7. "The term 'medical care' shall include the services of physicians, surgeons, nurses, persons licensed to treat human diseases without the use of drugs, hospitalization, medicines and appliances, and dental, optical and other medical treatments and services." All such services "shall be performed in accordance with the provisions as to professional conduct" prescribed by the state law. Members are not entitled to medical care in the municipal health and hospital facilities, except ordinary emergency service. (Subd. 5.)

8. No member is required to accept the services or medical supplies of any practitioner or hospital selected by the Board, but "subject to the rules and regulations of the Board," any member may "select of his own choice" any duly licensed physician, etc., and the Board "shall make provision for the exercise of such choice, and is hereby expressly prohibited from entering into any exclusive contract for the rendering of such services." The only restrictions on the power of choice are (1) it is "subject to the rules and regulations of the Board"; (2) the doctor or hospital chosen must render the services "pursuant to said rules and regulations"; and (3) the services or supplies must be furnished "at uniform rates of compensation to be fixed by the Board." Such rates, and any contract respecting the rendering of such services, is subject to review by, and requires the approval of the retirement board of the city and county.

* * *

Pursuant to the powers conferred by the charter amendment, an election was held on May 8, 1937, at which the petitioners were chosen as the members of the Health Service Board. They commenced performance of their duties, and after some nine months of study and consultation with professional advisers, adopted "Plan No. 1" for the rendition of medical services, and rules and regulations to carry it into effect.

Following the adoption of the plan, the Board determined upon the sum of $2.50 as the monthly deduction from compensation of members of the system, payable commencing March 15, 1938. This was certified to respondent controller, who made the deductions, but refused to make the funds available to petitioners until the legality of the charter provision was determined. Respondent treasurer likewise refused to make disbursements of funds for the same reasons. Accordingly petitioners sought relief in this court, and an alternative writ of mandate issued. Respondents filed a demurrer to the petition, and the matter is presented solely on questions of law. Counsel for respondents and various amici curiae make a number of contentions of unconstitutionality and alleged conflict with state law, and also attack the project as arbitrary and special legislation. It is a familiar observation that the courts are not concerned with the policy of duly enacted laws, but only with their validity; and in our opinion the present legislation violates no constitutional guaranties. But it may be pointed out, in this connection, that the overwhelming vote of city employees in favor of the measure was matched by the reception of the plan by the members of the medical profession. Over a thousand physicians, a majority of the licensed practitioners in the city, and nearly all of the city's hospitals, agreed to furnish services under the plan. And petitioners' brief states that among those who have joined the staffs are the president of the State Board of Health, the president of the California State Medical Association and past presidents of that association, the president of the San Francisco County Medical Society and several past presidents of that society, the president of the American College of Physicians, and leading members of the staffs of the medical schools of the University of California and Stanford University.

* * *

The first question is whether the city may by its charter provide for a regulation of this character. The answer to the question depends on whether the establishment of the health service system is a "municipal affair."

Under the provisions of Article XI, Section 8, of the California Constitution, a city or city and county having a freeholders' charter adopted pursuant to said section has the power of "municipal home rule." The section provides: "It shall be competent in any charter framed under the authority of this section to provide that the municipality governed thereunder may make and enforce all laws and regulations in respect to municipal affairs, subject only to the restrictions and limitations provided in their several charters, and in respect to other matters they shall be subject to general laws." In the early stages of municipal home rule in California, the charter prevailed only where it expressly covered the particular power exercised. Under the liberalizing constitutional amendment of 1914, the charter is not a grant of power but a restriction only, and the municipality is supreme in the field of municipal affairs even as to matters on which the charter is silent. The history of the movement has been fully covered in decisions and law review comments, and need not be repeated here. (See *Bank* vs. *Bell*, 62 Cal. App. 320; 15 Cal. L. Rev. 60; 11 Cal. L. Rev. 446.)

The purpose of the constitutional provisions was to make municipalities self-governing and free from legislative interference with respect to matters of local or internal concern. "It was to enable municipalities to conduct their own business and control their own affairs to the fullest possible extent in their own way. It was enacted upon the principle that the municipality itself knew better what it wanted and needed than the state at large, and to give that municipality the exclusive privilege and right to enact direct legislation which would carry out and satisfy its wants and needs." (*Fragley* vs. *Phelan*, 126 Cal. 383, 387.) No exact definition of the term "municipal affairs" can be formulated, and the courts have made no attempt to do so, but instead have indicated that judicial interpretation is necessary to give it meaning in each controverted case. The comprehensive nature of the power is, however, conceded in all the decisions, and it is recognized that it is not fixed but fluctuates in scope, and that changes in conditions make necessary new and broader applications thereof. (See *Bank* vs. *Bell*, supra, 15 Cal. L. Rev. 60; 11 Cal. L. Rev. 94, 446.)

In applying these principles, the following activities, similar to that under consideration here, have been held to be municipal affairs and hence within the city's legislative power: Providing for the compensation of a municipal officer or employee, irrespective of whether the duties of the office are exacted by the charter or imposed by state law. (*Trefts* vs. *McDougald*, 15 Cal. App. 584, 587; *Popper* vs. *Broderick*, 123 Cal. 450.) Providing for removal of municipal officers. (*Scheafer* vs. *Herman*, 172 Cal. 338.) Providing for pay of municipal employees while absent on sick leave. (*Jackson* vs. *Wilde*, 52 Cal. App. 259.) A pension or retirement system for municipal employees. (*Klench* vs. *Board of Pension Fund Commissioners*, 79 Cal. App. 171, 179; *Richards* vs. *Wheeler*, 10 Cal. App. [2d] 108, 111.) Supervision of sanitary conditions in a city, and provision for the health of its inhabitants, by establishment of a local board of health. (*People* vs. *Williamson*, 135 Cal. 415, 421.) Protection of property and lives through the licensing and regulation of a private

patrol system. (*In re Hitchcock*, 34 Cal. App. 111.) (See, also 15 Cal. L. Rev. 60.)

There can be no question, under these authorities, of the power of the city to establish a system of medical service for its employees or their dependents. Proper medical attention, freely available to all such employees and such dependents, should have a direct and beneficial effect on their health, and, therefore, their efficiency. If a pension or retirement system, or provision for sick-leave payments at the expense of the municipality is within the municipal power, the present plan, entirely self-supporting, and having a tendency to decrease sickness and lessen the expense of sick leave must equally be so.

* * *

With the municipal power to act in this field established, there remains only to consider briefly the specific details in which the plan is said to be invalid.

First, it is contended that the charter sets up no standard for the expression "adequate medical care," in its provision for exemption of those who are already provided with such care. The contention is made that the lack of criteria for determining this question leaves the matter within the uncontrolled discretion of the Board, which may destroy the whole plan by broadening the grounds of exemption, or may discriminate among the employees. It may be observed at the outset that at most this argument challenges the validity of this particular exemption provision alone, and is in no sense an attack on the system itself. The system is applicable to the great majority of the city's employees, and the comparatively few exemptions could be severed without destroying the general plan. (See *Bacon Service Corp.* vs. *Huss*, 199 Cal. 21; 22 Cal. L. Rev. 228.) But in truth the term is clear enough. As defined in subdivision 5 of the charter (see supra), it refers to the treatment by licensed doctors, etc., and in view of the great complexity and rapid changes in medical science it is neither desirable nor possible to set forth in a statute any detailed outline of particular services. This is one of the innumerable situations in which only the broadest type of standard may be stated, and the details must be left to the expert administrative board or officer chosen to carry out the legislative direction. Terms equally general have been frequently upheld against objections of uncertainty, and standards equally broad have been sustained against the objection of undue delegation of legislative power. (See *People* vs. *Globe Grain & Milling Co.*, 211 Cal. 121; *Tarpey* vs. *McClure*, 190 Cal. 593; *People* vs. *Monterey Fish Products Co.*, 195 Cal. 548; *Dominguez Land Corp.* vs. *Daugherty*, 196 Cal. 468; 19 Cal. L. Rev. 448; 15 Cal. L. Rev. 408.) The suggestion that the Board, chosen by vote of members of the system, might, in disregard of the purposes for which it was created and in defiance of constitutional limitations, exercise its delegated powers in a discriminatory manner, is fully answered by numerous decisions of the courts. It is to be presumed that the Board will exercise its powers in conformity with the requirements of the Constitution; and if it does act unfairly, the fault lies with the Board and not the statute. Constitutional guaranties against arbitrary and discriminatory action are read into the law, and the courts will compel administrative officials to respect them. (*People* vs. *Globe Grain & Milling Co.*, supra; *Gaylord* vs. *Pasadena*, 175 Cal. 433.)

* * *

It is next contended that the amendment makes an unconstitutional delegation of legislative power to the Board to perform municipal functions, in violation of Article XI, Section 13, of the California Constitution. But this section merely prohibits the legislature from interfering with the municipalities in respect of their municipal affairs, and has no application to the appointment of boards or officers pursuant to valid charter provisions. (*In re Pfahler*, 150 Cal. 71, 87.)

* * *

It is suggested that the charter provision is in conflict with the State Insurance Code in that it authorizes what is in effect an insurance business without a certificate of authority from the insurance commissioner; and it is contended in this connection that the subject of insurance is of state-wide concern and not a municipal affair. Nothing of substance is contained in this last statement, for though insurance may be a matter of general concern, the health and efficiency of city employees is a municipal affair; and a plan established by charter to safeguard the health, peace of mind and working efficiency of such employees is validly applied to them, though it might be entirely improper if applied to objects beyond the scope of municipal power. A still more obvious answer to counsel's suggestion is that the Insurance Code deals with the private business of insurance, and neither expressly nor impliedly purports to regulate governmental activities of municipalities. It is, of course, a well-settled doctrine that general words in a statute which might have the effect of restricting governmental powers are to be construed as not applying to the state or subdivisions. (*Estate of Miller*, 5 Cal. [2d] 588; *Balthasar* vs. *Pacific Electric Ry. Co.*, 187 Cal. 302.) These same considerations dispose of the further contention that the charter permits the Board to practice medicine in violation of the State Medical Practice Act.

* * *

It is next argued that the charter denies due process of law in providing for a compulsory deduction in an uncertain amount from the salaries of municipal employees. A conclusive answer is that no one has a vested right in his public employment except in so far as the right is conferred by statute or other valid regulation; that the employment is accepted under the terms and conditions fixed by law; and that one of the terms of the employment in the present case is the provision for the benefits of the health service system at the charge imposed therefor. The charter governs the salaries of city employees; by the amendment to the charter in force at the time the municipal salaries were fixed for the current fiscal year, the deduction was authorized and made accordingly. It is well settled that public employees have no vested right in any particular measure of compensation or benefits, and that these may be modified or reduced by the proper statutory authority. (*Pennie* vs. *Reis*, 80 Cal. 266, 269; *Snell* vs. *Byington*, 2 Cal. App. [2d] 127; *Casserly* vs. *Oakland*, 6 Cal. [2d] 64.) If salaries can be reduced, it is certainly clear enough that compensation provisions may be modified by substituting for a fraction thereof the valuable protection of comprehensive medical service. It is immaterial that the amount of the deduction is not limited to a stated sum; it is limited to the amount necessary to carry out specific purposes. Obviously, the Board must be given some leeway in fixing the amount in accordance with its experience; and the nature of the plan, in the light of economic studies, is such that the amounts will always be small in relation both to the total salaries and the benefits received. A safeguard against excessive exactions is found in the democratic control over the elective members of the Board; and doubtless any attempt by the Board to deprive employees of the substantial benefits of their compensation would be ground for redress in the courts.

It should not be forgotten, in this connection, that the deduction herein considered has none of the compulsory features of a tax, for no one is compelled to pay anything, unless he voluntarily seeks the public employment under the terms and conditions which the law imposes. (See *McAuliffe* vs. *Mayor*, 155 Mass. 216, 29 N. E. 517.)

* * *

The further contention is made that the exemptions under the charter constitute a denial of equal protection of the law; but a mere glance discloses that the classification is reasonable and proper. For example, the power to exclude those receiving salaries of over $4,500, a small fraction of the employees, is based upon the reasonable legislative determination that such persons may be able to provide themselves with sufficient medical care. The exemption of those who rely on healing by prayer is designed to avoid interference with the free practice of religion. And the exemption of those who already have adequate medical care avoids the arbitrary imposition of the facilities of the system upon those who already have provided for equal facilities from another source.

* * *

The next contention is that the plan cannot legally include the school teachers and others employed by the San Francisco School District, which, though it covers the same territory as the city and county, is a separate entity. This contention, if sustained, would only exclude this group of employees from the benefits of the system without affect-

ing the validity of the plan itself; and the objection could only be properly raised by those whose rights were invaded by inclusion in the system. (See *People* vs. *Perry,* 212 Cal. 186.) We are satisfied, however, that the objection is, on the merits, unsound. The school system has been held to be a matter of general concern rather than a municipal affair, and consequently is not committed to the exclusive control of local governments. But the cities may make local regulations beneficial to and in furtherance of the school system, provided that these provisions do not conflict with the general law. (*Whitmore* vs. *Brown,* 207 Cal. 473; *Esberg* vs. *Badaracco,* 202 Cal. 110; *Anderson* vs. *Board of Education,* 128 Cal. App. 514.) The power thus to regulate the schools by charter provisions is in fact recognized and declared in the State School Code, Section 5.405, which declares: "Nothing in this part shall be construed so as to repeal or negate any provisions concerning employees of school districts contained in the charter of any city, county or city and county heretofore or hereafter adopted and approved in conformity with Article XI of the Constitution of this State." Certainly a regulation designed to promote the health and efficiency of teachers is in furtherance of the objects of the school system, and it does not conflict with any general law. The state law establishes teachers' tenure, but the charter does not affect tenure. It only provides for a deduction from the monthly salary, and it has been expressly held in this state that the tenure law does not carry with it any assurance against change in salary. Hence, just as in the case of other municipal employees, a reduction or modification of compensation impairs no vested rights. (*Abraham* vs. *Sims,* 2 Cal. [2d] 698; *Emerson* vs. *Board of Trustees,* 23 Cal. App. [2d] 432; *Hodge* vs. *Board of Education, 22* Cal. App. [2d] 341.)

* * *

Amicus curiae makes the suggestion that the plan interferes with the freedom of religion on the ground that it provides an exemption for employees believing in healing by prayer, and requires the employee to disclose his religion by filing of the affidavit making the exemption claim. It seems unnecessary to point out that there is no interference with the practice of religion in the mere disclosure of a particular faith to a board which has nothing to do with its practice. In no way does the charter permit the slightest interference with the practice or belief in any religious faith. (See *Hamilton* vs. *Regents of University of California,* 293 U. S. 245.)

* * *

Finally, we are told that some of the rules and regulations and practices of the Board are, or may be arbitrary or discriminatory with respect to particular individuals. There is no reason to consider such a contention at this time, for the only issue before us is whether the charter amendment and the plan adopted thereunder are valid. If so, the respondents must release the money to the Board in order that it may carry out its duties. If in the performance thereof the rights of any individual are infringed, the regular procedure of the courts is available to test the action. It is premature and irrelevant to deal at this time with speculative future acts of the Board which involve no present invasion of private rights. (See *People* vs. *Globe Grain & Milling Co.,* supra.)

* * *

There being no valid objection to the system and plan herein considered, it follows that respondents must perform the duties imposed upon them and make available to petitioners the funds collected.

Let the writ issue as prayed for.

I concur in the judgment. HOUSER, J.

* * *

Dissenting Opinion

The charter provision of the city and county of San Francisco which is attacked in the present proceeding provides, in effect, for compulsory health insurance of municipal employees. It allows the Health Service Board, a private organization over which the city has no control, to order the city controller to deduct an amount to be determined by it from the compensation of each employee of the city and deposit such sum "with the treasurer of the city and county to the credit and for the use of the system." Certain persons shall be and others may be exempted from this requirement. The money taken from the employees' salaries may be paid out by the treasurer only upon "audit by the controller and the controller shall have and exercise the accounting and auditing powers over the funds of the system which are vested in him by this charter with respect to all other municipal boards, officers, and commissions."

* * *

The city attorney contends that the amendment grants unlawful delegation of power to the Health Service Board. He relies upon Section 13 of Article XI of the Constitution of California, which provides, in part, that "the legislature shall not delegate to any special commission, private corporation, company, association, or individual any power to make, control, appropriate, supervise or in any way interfere with any county, city, town or municipal improvement, money, property or effects. . . ." The legislature in approving the charter amendment, in effect delegated to an association of individuals the power to make, control, appropriate and supervise certain property interfering with the operation of the municipality. This association, created neither by election of the city's voters nor appointment by its officers, is given the authority to determine the amount of money to be taken by the controller from the salaries of the employees for the purpose of carrying on a nonpublic engagement, and further permits the use of the facilities of the offices of the registrar and treasurer for the purpose of administering that which is unquestionably not of a general public character.

If, notwithstanding the constitutional provision, the Health Service Board can lawfully carry out the plans it has undertaken, then innumerable organizations can be created for the purpose of carrying on coöperative enterprises of various kinds. It is said that the successful operation of the health service will increase the employees' peace of mind. Undoubtedly, many municipal employees would feel that they had more social security if they could purchase groceries through a coöperative organization. Their economic status would be improved if they could secure housing through group purchasing power. But to set up such organizations with funds compulsorily taken from each employee's salary through the machinery of the city government constitutes, in my opinion, a violation of the constitutional provision.

* * *

The city attorney also claims that the health service plan is not a municipal affair, but, on the contrary, is nothing more than a private engagement affording an opportunity for certain employees of the city and county to procure stated kinds of medical care for an amount to be fixed by the board selected by the employees to run the system. Such a program, he says, does not concern the government of the municipality. In *Bank* vs. *Bell,* 62 Cal. App. 320, the court defined "a municipal affair" as follows: "In defining a 'municipal affair' it has been said that 'the true test is that which requires that the work should be *essentially public and for the general good of all of the inhabitants of the city.* It must not be undertaken merely for gain or for private objects. Gain or loss may incidentally follow, *but the purpose must be primarily to satisfy the need, or contribute to the convenience of the people of the city at large.* Within that sphere of action, novelty should impose no veto (*Sun Printing etc. Assn.* vs. *New York,* 8 App. Div. 230)." In *Fragley* vs. *Phelan,* 126 Cal. 383, 387, it was held that " 'municipal affairs,' as those words are used in the organic law, refer to the internal business affairs of a municipality." See, also, *In re Hitchcock,* 38 Cal. App. 111, 114.

* * *

All of the decisions construing the phrase "municipal affair" define it as referring to those things which are so intimately connected with the government of a municipality as to affect all of its people, or as including a city's right to compensate employees in addition to the amount of wages paid. But the health service plan neither affects all of the inhabitants of the city nor is it limited to employees. It includes dependents of employees related by consanguinity or marriage, retired city employees, retired school teachers, members of the Board of Education and employees of the public school system. Medical care is to be given by private physicians having no contractual relation with the city but acting solely for the Health Service Board, over

which the city has no control. "Members of the system shall have and possess no claim or recourse against any of the funds of the municipality by virtue of the adoption or operation of any plan for rendering medical care . . . but the claim and recourse of any such member shall be limited solely to the funds of the system." It is, therefore, obvious that the plan has nothing to do with the public health, security, or general welfare. It is simply social health insurance for a restricted group of individuals who are compelled to participate in it.

* * *

For another reason, at least a portion of the charter provision is invalid. Section 172.1 of the charter requires all teachers to become members of the system. Membership in the system is made compulsory. School teachers are not employees of the city and county of San Francisco but of a school district, a governmental entity entirely separate from the city and county. The teachers derive their credentials from the state, and their compensation from funds of the school district and the state. Under Section 8 and 8½ of Article XI of the Constitution, a municipality is strictly limited to the enactment of laws in respect to "municipal affairs." The courts have frequently declared that the public school system of the state is not a "municipal affair" but a "state affair," a matter of general and not local concern. (*People* vs. *Martz*, 2 Cal. [2d] 136, 138; *Gerth* vs. *Dominguez*, 1 Cal. [2d] 239, 242.)

* * *

I am of the opinion that the writ should be denied.

EDMONDS, J.

LEGAL RIGHT OF A CORPORATION TO PRACTICE MEDICINE*

OPINION OF THE SUPREME COURT OF THE STATE OF CALIFORNIA

Opinion Handed Down on September 2, 1938

S. F. No. 15690. In Bank. September 2, 1938

People of the State of California, ex rel. State Board of Medical Examiners, Plaintiff and Respondent, vs. Pacific Health Corporation, Inc., Defendant and Appellant.

For Appellant—Knight, Boland & Riordan.

For Respondent—U. S. Webb, Attorney-General; Lionel Browne, Deputy Attorney-General.

Amici Curiae—Hartley F. Peart, Howard Hassard.

Amicus Curiae for the State Bar of California—Gilford G. Rowland.

BY THE COURT

This is an appeal from a judgment in *quo warranto* against defendant holding its activities violative of the California Medical Practice Act (now Sections 2000-2496 of the Business and Professions Code).

The facts are stipulated. Defendant Pacific Health Corporation, Inc., is a corporation organized under the general corporation law of the State of California, with its principal place of business in San Francisco. Upon application of persons in good health, the defendant issues a contract by the terms of which defendant undertakes to pay for services rendered by physicians, hospitals, ambulance and medical laboratories under certain circumstances, and the applicant pays the required sum or premium therefor. When a contract holder becomes sick or is injured, defendant advises him from whom these services are to be obtained, that is, the physician, hospital or ambulance available to him. After the services are rendered, defendant pays the charges. Defendant keeps a list of physicians and surgeons approved by it, and to obtain the benefits of the service the contract holders must, save as to emergency expenses not exceeding $50, accept a doctor from the list.

Defendant is a stock corporation, operated for profit. It advertises its services and solicits the public for purchase of its contracts, paying commissions to its soliciting agents. The money collected from contract holders is paid into the general fund, and this, together with the capital and surplus, is invested. The charges for medical services are paid out of the general fund and income from investments.

* * *

Upon these facts the lower court concluded that defendant was illegally engaged in the practice of medicine, in excess of its corporate rights, powers, and franchises. It was ordered that defendant be excluded from such practice, and that its articles of incorporation be amended to conform to the decree. We are in accord with the court's conclusion.

* * *

The issue presented herein is not new, and has been considered in this state by recent cases which are controlling. It is an established doctrine that a corporation may not engage in the practice of such professions as law, medicine or dentistry. (*People* vs. *Merchants' Protective Corp.*, 189 Cal. 531; *Painless Parker* vs. *Board of Dental Examiners*, 216 Cal. 285; *Pacific Employers' Ins. Co.* vs. *Carpenter*, 10 Cal. App. [2d] 592; *Benjamin Franklin Life Assur. Co.* vs. *Mitchell*, 14 Cal. App. [2d] 654; *People* vs. *United Medical Service*, [Ill.] 200 N. E. 157, 103 A. L. R. 1229; see notes, 25 Cal. L. Rev. 91; 10 So. Cal. L. Rev. 329; 30 Ill. L. Rev. 533.) This doctrine is not challenged by defendant, which seeks to distinguish its activities from those previously held to constitute illegal practice of medicine. It is stated that defendant does not itself undertake to perform medical services, but merely to furnish competent physicians; that the contracts do not contemplate that services shall be performed at its offices, but elsewhere; and that the doctors are not employed by defendant on a salary basis, nor directed by defendant, but are compensated for actual services after they are rendered. Defendant's theory is that the doctors are independent contractors, and that this fact absolves it of the charge of practicing medicine.

We are unable to agree that the policy of the law may be circumvented by technical distinctions in the manner in which the doctors are engaged, designated or compensated by the corporation. The evils of divided loyalty and impaired confidence would seem to be equally present whether the doctor received benefits from the corporation in the form of salary or fees. And freedom of choice is destroyed, and the elements of solicitation of medical business and lay control of the profession are present whenever the corporation seeks such business from the general public and turns it over to a special group of doctors. As the court said in *Pacific Employers' Ins. Co.* vs. *Carpenter*, supra, 10 Cal. App. (2d) 601: "But we need not quibble here over the use of terms, as it is immaterial whether the appointed practitioners are termed employees, agents or appointees of the petitioner. The fact remains that petitioner's agreement was to furnish, in consideration of the premium paid by the insured, the services of doctors and dentists who were to be appointed, engaged, hired or employed by petitioner for the purpose of furnishing such services. Any such agreement is clearly condemned as unlawful and against public policy by the authorities above cited."

The foregoing case is so similar in its facts to the instant case as to be conclusive on the issue before us. (See, also, *Benjamin Franklin Life Assur. Co.* vs. *Mitchell*, supra.)

Defendant suggests that the Medical Practice Act should be strictly construed so as not to prohibit its activities; but this argument ignores the basic policy of the law, of which the statute is merely declaratory, against corporate practice of the learned professions, directly or indirectly. (See authorities cited supra.)

Although, as we have already pointed out, defendant does not challenge but fully concedes that corporations cannot practice the learned professions, the procedure which it seeks to defend is within the prohibition of this doctrine. To avoid this result, defendant launches into a discussion of the effect of an adverse decision upon other organizations and activities. Our attention is called to certain data from medical and lay sources in support of the movement for group medicine and health insurance, and we are told that a decision against defendant will outlaw all fraternal,

* In the case of *People* vs. *Pacific Health Corporation*, the special question involved was the right of the Pacific Health Corporation, if any, to furnish the services of physicians to its members. The court in a 4–3 decision decided in favor of the people of the State of California and against the Pacific Health Corporation. In this case Mr. Hartley F. Peart and Mr. Howard Hassard appeared as "friends of the court." The majority opinion was concurred in by Justices William H. Langdon, Jesse W. Curtis, J. Emmet Seawell, and John Shenck.

Editor's Note.—Asterisks and florets are insertions by the editor.

See also editorial comment on page 253.

religious, hospital, labor and similar benevolent organizations furnishing medical services to members. We have given careful consideration to this argument and we find it wholly unconvincing.

The question of the effect of this decision upon any other organizations is not squarely before the court, and the information in the record as to their character and activities is meager and unsatisfactory. If we undertook to determine their legality in this proceeding, in which they are not represented, our decision would have no binding force. But it should be pointed out that the fear of applying the holding of this case to such philanthropic associations as those mentioned does not exist in the minds of the directors thereof, nor has it been suggested that the public authorities contemplate any attack on them. This illusory apprehension is expressed by defendant alone, in an attempt to bolster up its case by bringing it within the general class of associations furnishing medical or health benefits which have been tacitly approved for generations. But a most obvious and, to us, a fundamental distinction must be made between defendant and these other institutions. In nearly all of them, the medical service is rendered to a limited and particular group as a result of coöperative association through membership in the fraternal or other association, or as a result of employment by some corporation which has an interest in the health of its employees. The public is not solicited to purchase the medical services of a panel of doctors; and the doctors are not employed or used to make profits for stockholders. In almost every case the institution is organized as a nonprofit corporation or association. Such activities are not comparable to those of private corporations operated for profit and, since the principal evils attendant upon corporate practice of medicine spring from the conflict between the professional standards and obligations of the doctors and the profit motive of the corporation employer, it may well be concluded that the objections of policy do not apply to nonprofit institutions. This view almost seems implicit in the decisions of the courts, and it certainly has been the assumption of the public authorities, which have, as far as we are advised, never molested these organizations.

The other question raised by defendant's proffered materials is whether the time has come, as indicated by the movement for health insurance and group medicine, to reverse the long-settled policy against corporate medical practice and declare it legal and proper. A simple answer would be that the few extracts from the opinions of writers which we find in the briefs furnish us with no evidence whatsoever of a widespread change in social viewpoint sufficient to repudiate the existing law of practically all the states. All that we have before us is the proof of a controversy, which has raged for years, between medical men, sociologists and others, as to the future course of medical practice. The desirability of present methods and the suggested reforms, including various kinds of insurance and group treatment, are hotly debated. (See 25 Cal. L. Rev. 91, 93.) Public policy may change, and doubtlessly where statutes do not cover the field, the court may follow such changes, but the court must, in such case, declare the *public* policy, the social view of people generally, and not merely its own private choice among hopelessly conflicting views of desirable reform of settled practices or principles in this field. In the present circumstances there can be no true declaration by this court that a change in social viewpoint now requires the abandonment of the rule against corporate practice of medicine. Such a drastic change should come from the legislature, after the full investigation and debate which legislative organization and methods permit. Though certainly aware of the controversy, and with presumed knowledge of our decisions preventing corporate practice (see supra), the legislature thus far has not acted, and until it does we deem it proper to follow the existing law. (See *Pacific Employers' Ins. Co.* vs. *Carpenter*, supra, 10 Cal. App. [2d] 602.)

We might observe, in conclusion, that an admission of the desirability of some form of health insurance or group medicine by no means requires approval of the activities of defendant. It is perfectly possible to bring adequate medical service to the vast numbers of people who now can ill afford it by some means which will protect both the profession and the public from the evils of corporate control of the practitioner. An example is found in the system adopted by the city and county of San Francisco for the furnishing of medical service to its employees, approved by us in *Butterworth* vs. *Boyd*, S. F. 16017, this day filed. (Ante, p. ——.)

The future of group medicine would seem to lie either in such well-considered plans, submitted to and adopted by the proper legislative authority, or in a carefully regulated statute setting forth the means by which private organizations may offer such services.

The judgment is affirmed.

* * *

Dissenting Opinion

This case presents only two questions for decision: (1) Does the plan followed by the appellant in providing health service for its contract holders violate the provisions of the Medical Practice Act, and (2) if not, is its plan violative of public policy? I find nothing in the Act which expressly or by implication prohibits a corporation from hiring a physician regularly licensed to practice in this State to care for its employees or members.

The decision to the contrary relies upon the cases of *Painless Parker* vs. *Board of Dental Examiners*, 216 Cal. 285; *People* vs. *Merchants' Protective Corp.*, 189 Cal. 531; *Pacific Employers' Ins. Co.* vs. *Carpenter*, 10 Cal. App. (2d) 592; and *Benjamin Franklin L. Assn. Co.* vs. *Mitchell*, 14 Cal. App. (2d) 654. The two appellate court decisions are directly in point in support of respondent's position. The opinions in those cases clearly hold that a health insurance plan similar to that involved in the present case is violative of the Medical Practice Act and of public policy, in that it contemplates and provides for the practice of medicine by a corporation, although it may be noted that the Benjamin Franklin case was decided by a divided court. The Painless Parker case involved the unlawful practice of dentistry by a corporation in violation of the Dental Practice Act, a statute substantially different from the Medical Practice Act in that it expressly prohibited the practices there involved. There can be no doubt, and appellant concedes, that within certain constitutional limitations the legislature may declare that the employment of physicians by lay persons or corporations constitutes the practice of medicine. The Dental Practice Act did so declare. The Medical Practice Act contains no such provision, and the appellant expressly excludes dental care from its contracts.

The Merchants' Protective Corporation case is likewise not controlling. The evidence in that case showed that the corporation contracted to hire attorneys to render legal advice to members of the corporation. It attempted to justify its action, according to the opinion of the court, upon the ground that "it is merely an agency for the bringing of attorneys and clients together and is not itself engaged in practicing law." It was held that this contention was not supported by the facts in that under its articles and contracts the corporation itself, through attorneys, purported to give legal advice. The implication of the opinion is that if the corporation were in fact an agency, which for a fee brought attorneys and clients together, its activities would have been within the law.

The present case involves a factual and legal situation fundamentally different from the contract for legal services. Here the corporation is acting as an agency for bringing the doctor and the patient together. In addition, it underwrites or insures the cost of such medical care. The doctor, in caring for the insured, is not rendering medical care on behalf of the corporation. When the doctor starts treatment of the member, the relationship of doctor and patient, with all that that relationship implies, is created. The situation is legally no different from that where A (who may be a layman or a corporation) secures medical services for B from C, a duly licensed physician, C agreeing to look solely to A for his fee. Could it be contended that A is practicing medicine? I think not. As I read the articles of incorporation and the contracts here involved, the corporation does not directly or indirectly agree to perform any medical service; it merely agrees to pay for it when rendered by persons duly licensed to render it. It is true that the member does not have unlimited choice in the selection of a doctor, and that he must select a physician approved by the corporation. But there is nothing in the stipulated facts indicating that the corporation directly or

indirectly supervises the doctors in the professional service rendered the member.

There are cases from this state and elsewhere recognizing that, in the absence of a statute providing to the contrary, a corporation or a layman may lawfully employ a doctor to care for its patrons or members. These cases hold that practices substantially similar to those here involved do not constitute the unlawful practice of medicine. In *Renwick* vs. *Phillips*, 204 Cal. 349, it was held that a storekeeper may employ a person licensed under the Medical Practice Act to treat his patrons. In that case the Board of Medical Examiners had revoked the license of Doctor Renwick upon the ground that he had aided and abetted one Roy Finney, a lay person, to practice medicine. This court stated: "The petitioner (Renwick) was a licensed chiropodist. The said Roy Finney conducted a chiropodist parlor, equipped with a variety of foot remedies and appliances which he prepared and sold there. He employed the petitioner and respondent herein to act as a chiropodist in connection with his said establishment and to give such treatment and perform such operations as only could be done by the holder of a regular chiropodist's license so to do. In so far *there was nothing illegal or unprofessional in the relations or conduct of Doctor Renwick in his connection with said Finney at the latter's place of business. . . .*" This decision was written by Justice Richards, who six years before had written the Merchants' Protective Corporation case. In *Pilger* vs. *City of Paris Dry Goods Co.*, 86 Cal. App. 277, it was held that "there can be no doubt that a corporation may undertake to furnish the services of a competent physician or the services of a competent chiropodist." In *State Electro-Medical Institute* vs. *State* (Neb.), 103 N. W. 1078, the supreme court of Nebraska held that, although a corporation could not practice medicine, it could contract with its members to furnish them with medical care. The court stated: "The intention of the law is that one who undertakes to judge the nature of a disease, or to determine the proper remedy therefor, or to apply the remedy, must have certain personal qualifications; and, if he does these things without having complied with the law, he is subject to its penalties. Making contracts is not practicing medicine. Collecting the compensation therefor is not practicing medicine within the meaning of this statute. No professional qualifications are requisite for doing these things." See, also, *State Electro-Medical Institute* vs. *Platner* (Neb.), 103 N. W. 1079; *State* vs. *Lewin* (Mo.), 106 S. W. 581.

Respondent and amici curiae, appearing on its behalf, urge that the plan of the appellant violates public policy. But if the policy were as contended by respondent, it would be clearly stated in the pertinent statutes. This the legislature has not seen fit to do. In recent years the subjects of health insurance and group medicine have been the frequent source of discussion and investigation, and both lay and professional opinion concerning them is sharply divided. The need for some such service, particularly in the lower income brackets, is conceded by all parties to the controversy. The courts, in the absence of legislation, should not on the ground of public policy place a stumbling-block in the way of working out this problem. It is not a proper function of the courts to thus block the natural growth of social and economic processes.

The attempt of lay associations or corporations to retain doctors for the purpose of rendering medical services to their members in return for the payment of dues or a premium is by no means a modern development. Judicial notice can be taken that for many years fraternal, employee, and hospital associations, and various medical-hospital services have been rendering such services to their members through doctors employed by them. Respondent does not question the propriety of their activities. If this court should hold that the plan adopted by appellant is unlawful on the ground urged by respondent, that is, that it permits a corporation to unlawfully practice medicine, it would inevitably and necessarily follow that all of such associations are, likewise, unlawfully practicing medicine. Such a conclusion, adversely affecting the interests of thousands of individuals, should only be reached if compelled by statutory enactment or by clear public policy. Neither is present in the instant case.

It is claimed that the medical profession will be commercially exploited if private corporations interested solely in a profit are permitted to engage in activities such as are here involved. If that is an evil the solution rests not with the courts, but with the legislature. It might be added that under the Workmen's Compensation Act insurance companies through doctors are daily rendering medical service to thousands of injured employees to the apparent satisfaction of all concerned.

The judgment should be reversed.

EDMONDS, J.

We concur:
WASTE, C. J.
HOUSER, J.

THE LURE OF MEDICAL HISTORY†

THE TALMUD A MEDICAL LABORATORY*

By ABRAHAM BERNSTEIN, M.D.
San Francisco

THROUGH many centuries ancient Talmudic[1,9] writers studied, thought, argued, and wrote. Among these writings, a statement is found which clearly indicates that during the time of the kings[1,2] (2665 B. C.) the first temple already contained books devoted solely to medicine. Presumably these books were later destroyed by order of one of the rulers,[1,2] (King Ezekiel), because the people did not look to God for help, but rather consulted priests, who studied these books. However, an organized system of medical science as such is not found in the Talmud;[1,9] here and there, there are only brief statements and notes regarding the treatment of individual diseases. These statements are of a nature that suggests a considerable familiarity of their authors with the the workings of the human body. These statements, too, were merely incidental to the discussion of certain laws, rites, and religious rituals. But for all this, the Talmud[1,9] fostered medical science as the only salvation of the race.

TALMUD, IN GENERAL RELATION TO MEDICINE

The maxims of the Talmud[1,9] are evidence of this, as for example: "Honor the chakim (physician) before you need him." Another saying, "If there are two healers in a town, one takes money and the other not, entrust better your sick body under the care of him who demands pay for his healing."

The rabbis held the physician in the highest respect, and considered his services so indispensable to the community that they forbade living in a city where there was no physician. Medical studies were carried on through observations of clinical reactions, through experimentation and autopsies. Rabbi Jose ben Chalafta was known as "the experimenter." He was interested in comparing the action of herbs and different chemicals on animals in relation to human beings.

To further the interests of medicine, autopsies could be ordered by a court of law, as could also

† A Twenty-Five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of CALIFORNIA AND WESTERN MEDICINE. The column is one of the regular features of the Miscellany Department, and its page number will be found on the front cover.

* From the Department of Obstetrics and Gynecology, University of California Medical School.

Read before the San Francisco County Medical Society, Section on History, January 11, 1938.

the exhuming of a body; while quackery was prevented by the system of licensing physicians.

The familiarity of the rabbis with anatomy, physiology, bacteriology, and surgery is most surprising. The descriptions of the bones, muscles, tendons, circulatory, digestive, respiratory, and generative organs, in many instances lack only the modern nomenclature to be acceptable by present standards.

PHYSIOLOGY

The nature of the secretory glands—every one of which, they said, secretes a fluid peculiar to itself—was recognized by them two thousand years before Beaumont[7,8] experimented on Alexis St. Martin. The real function of the stomach, and the part which the intestines play in the digestion of food, was ascertained by them twenty-one hundred years before Pavlov[7,8] published his discoveries to the medical world. More than two thousand years before Morgagni,[8] the father of modern pathologic-anatomical research, the rabbis enumerated 140 pathological conditions. While Galen[4,6] still considered the thoracic cavity as filled with air and thought such a condition necessary for normal breathing, the rabbis of the Talmud[1,9] said that a pneumothorax is fatal. At a time when the function of the brain and that of the spinal cord were but imperfectly understood, the Talmud[1,9] considered the brain, which it described as having two linings, a tender (pia mater) and a tough (dura mater), as being the seat of the reasoning faculties, while upon the integrity of the spinal cord depends all the movements of the body. The heart, in which the auricles and ventricles were described, is the organ upon which the life of all other bodily organs depends; the liver is the laboratory for blood, the pancreas is an accessory of the liver; and respiration was compared to the process of burning, so that expired air is incapable of sustaining life. The difference between the peritoneum and the extraperitoneum was noted and, contrary to the current opinion of the time, the arteries were filled, not with air (pneuma), but with blood (dam). Moreover, the danger of eating meat or drinking milk of tuberculous animals was nowhere mentioned in the Greek writings, but the Talmud[1,9] fully recognized it. It even differentiated between tuberculous caverns and bronchiectasis, something that is not to be found in all literature before, or at the time of the Talmud.[1,9,10]

BACILLI IN THE TALMUD

As regards infectious and contagious diseases, we know, of course, that the Bible already contains quarantine laws.

The Talmud[1,9,10] ascribed all ailments of the human race to certain little "dangerous ones," termed "shedins" (destroyers). It was further stated that "if permission could be given to the naked eye to see these 'shedin,' no man could exist." Please bear in mind that no microscopes were in existence at that time! It is too bad that the "shedin" were not termed "bacilli," for then our germ theory of disease would indeed have been recognized at an early date.

These "shedin" were divided into four classes: (1) those of the air; (2) those of the water and grease liquid; (3) those of animals; (4) those of decomposed wood.

The animal most subjected to the invasion of "shedin" is the hog and certain kinds of fish.

Everyone is familiar with the fact that the laws of hygiene found in the five books of Moses[2] had a very favorable influence on the health of the nation. Reference was had here to the laws governing the use of various foods as well as the descriptions of various diseases, especially skin diseases. For example, leprosy is due to certain "shedin" nestling beneath the skin. This is caused by eating certain fish or of wearing hides of animals not transformed by the chemical process of tanning.

HYGIENIC LAWS OF THE TALMUD

There is no doubt that the wise lawmakers of the ancient Hebrews acquired their knowledge of social hygiene, as well as the knowledge of individual diseases, from the Egyptians. In the course of time, however, this knowledge has become more extensive and improved upon to such an extent that some of the hygienic principles in use at that time could be employed today. This may well be illustrated by the rules regulating disinfection and treatment of fecal material. It is conceivable that the priests, and the temple attendants, who came daily in contact with individuals suffering from various affections, eventually were in a position to recognize those diseases.

Other hygienic laws were enacted. No Jew was allowed to wear hide in its raw state as a garment. No tannery was allowed to be established, except two miles from the city and not on the east side. The east side was specified because the winds of the Orient were of an easterly nature. If an animal was killed the blood must be covered with dust or ashes, since "mother earth is the best destroyer of bacilli."

No spitting was allowed in the city of Jerusalem. If a patient died, his clothes were destroyed and the house where he resided fumigated.

One should be careful of the flies of lepers, as they transmit disease. This compares perfectly with our modern scientific views of transmission of disease by flies.

Every slaughtered animal was examined carefully for lung or liver trouble. This sanitary benefit is derived by everyone now, due to careful government inspection of food.

The drinking of water that has been standing uncovered is prohibited, unless it is first boiled. This bears out our theory of contamination. Also, there is a warning which forbids any man to eat "without first washing his hands." "Unwashed hands may cause blindness, deafness, or polypus." Long before Pasteur,[3] the rabbi knew about these germs or "shedin."

SURGERY

The high degree to which surgery had been developed may be seen both from operations and their *modus operandi*. Surgeons were known as "ummanim." The operating room is referred to as "the marble hall." A tunic was worn by the surgeon

over his clothing; various instruments were used. The borders of old wounds were freshened up to effect a union. In major operations an anesthetic was administered "same de shinta."

Among the operations, fractures, trephining, and amputations are frequently mentioned. Artificial teeth, made of hardwood, gold or silver, are also mentioned. The removal of the spleen, various forms of castration, intubation of the larynx, and an operation for an inperforate anus are described. Cranial plates, uterine speculum, and crutches were in use.

EMBRYOLOGY

Our embryologists might be especially interested to know that their specialty attained to a high degree of knowledge and familiarity on the part of the ancient rabbis. Aba Saul, with whom medicine was merely an avocation (his vocation being that of a grave digger), described minutely a fetus at the end of the sixth week. Rabbi Samuel,[1,9] on the other hand, says that it is impossible to determine the sex of an embryo before the end of the fourth month, a theory which is held by embryologists of our own time.

From the above we get just a few glimpses from the "laboratory of the Talmud." What is more surprising is that the Talmud formulates the principle that the symptom of any disease is merely the external manifestation of internal functional disturbances. This principle, which is today the prevailing teaching of pathology, is not even alluded to in the writings of Hippocrates[5] and is only hinted at vaguely by Galen[6] in his "De Locis Affectis."

350 Post Street.

REFERENCES

1. Jerusalem Talmud, 1878-1890.
2. The Old Testament (Holy Bible).
3. Hiss-Zinsser: Textbook of Bacteriology. D. Appleton & Co., 1922.
4. Wise: Review of History of Medicine, 1867.
5. Adams: "The Genuine Works of Hippocrates." London, 1849.
6. Kuhn: Medicorum Graecorum Opera quae extant, Galen, Vol. 6, 1821-33.
7. Pavlov: "Work of Digestive Glands." London, 1910.
8. Wright: "Applied Physiology," Chap. VII, 1936.
9. Israels: Babylonian Talmud, 1848.
10. Ginzburger, G.: "Medicine in the Talmud," Göttingen, 1743.

CLINICAL NOTES AND CASE REPORTS

ACUTE DIFFUSE HEPATITIS WITHOUT JAUNDICE*

By EDGAR WAYBURN, M.D.
San Francisco

THE most striking sign of acute diffuse hepatitis is jaundice. Often the presence of it establishes hepatitis as the diagnosis, while the final diagnosis of acute hepatitis is rarely made without it. A search through medical literature reveals very few published cases which demonstrate acute diffuse liver damage without the presence of a certain amount of icterus. As a rule, the degree of the liver damage is more or less paralleled by the degree of the jaundice.

Polack[1] reported the case of a 27-year-old woman with a two weeks' history of nausea, vomiting and fever, whose examination demonstrated some epigastric tenderness but no icterus. Ten days later the liver was 3 to 4 centimeters below the right costal margin, where it remained at the time of discharge twenty-three days after admission, although she was symptom-free. Unfortunately, no icterus index or serum bilirubin was done on admission. Eight and twenty-one days later the icterus index was four (on each of two occasions). There was slight transitory urobilinuria. The galactose test was strongly positive. The urine showed urobilinogen, but no bilirubin.

This case probably represents a mild subacute hepatitis, of which, doubtless, there are many, with little or no jaundice. An effort to find a case similar clinically or pathologically to the following one was unsuccessful.

REPORT OF CASE

H. E., a sixty-year old white male, a cook, was admitted to the Stanford Medical Service of the San Francisco Hospital on November 11, 1935. Four years before admission he developed a "cold," which consisted largely of a chronic cough with the expectoration of sputum. These symptoms remained without much change for almost four years. He had no chest pain, night sweats, or hemoptysis. His appetite failed gradually, resulting in progressive weight loss. A few months before admission he noted dyspnea on climbing stairs. This dyspnea progressed until it was present when at rest. Along with this there was marked and increasing weakness, advancing until his legs seemingly gave way when he walked.

Family History.—His father died at seventy-two, with "a blood-clot on the brain"; his mother died at sixty-one with a liver complaint.

Past History.—His past history included measles, scarlet fever, pneumonia, croup, and numerous colds. In his earlier years he drank a pint of liquor daily. He smoked cigarettes moderately.

Physical Examination.—Temperature was 98.6 degrees Fahrenheit. Pulse, 120. Respiration, 25. A fairly well-developed, poorly nourished, pale, elderly man, with dry, scaly skin. The eyes were red-rimmed and blood-shot. The sclerae were not jaundiced. The nose was clear, the throat was reddened. A few dirty carious teeth were present. There was generalized shotty lymphadenopathy. The heart was not enlarged. The sounds were poorly heard. There were no murmurs. The blood pressure was 118/90. The abdomen was flat, held tensely. The liver was palpable 10 centimeters below the right costal margin, nontender, smooth-surfaced. The edge seemed irregular. The spleen was not felt. There was a skin scar (supposedly from a burn). The testicles were large, the prepuce slightly ulcerated. The two terminal phalanges of the right index finger were surgically absent. Both deep and superficial reflexes were absent.

Laboratory.—The hemoglobin was 56 per cent (Sahli). Red blood cells, 3,230,000. White blood cells, 23,700. Smear: N, 73; L, 23; M, 2; E, 2. Urine: Clear, yellow, acid. Specific gravity, 1.025. Albumin, 0; sugar, 0. Sediment, negative. Blood Wassermann, negative; Kolmer, negative. Icterus index 2.9. Takata reaction was negative. X-ray: "The heart and aorta are not enlarged, but the aorta is somewhat increased in density. There is a slight amount of pulmonary congestion."

Course.—Ten days after admission the patient had an attack of acute respiratory distress. The lungs became filled with coarse moist râles and rhonchi. The sputum was profuse and frothy. Relief was obtained from morphin.

* From the Department of Medicine of Stanford University, and the Department of Public Health of the City and County of San Francisco.

1 Polack, Edmund: Hepatitis Acute Sine Icterus—Subchronisk Hepatitis, Ugeskrift for Laeger, 38:965, 1935.

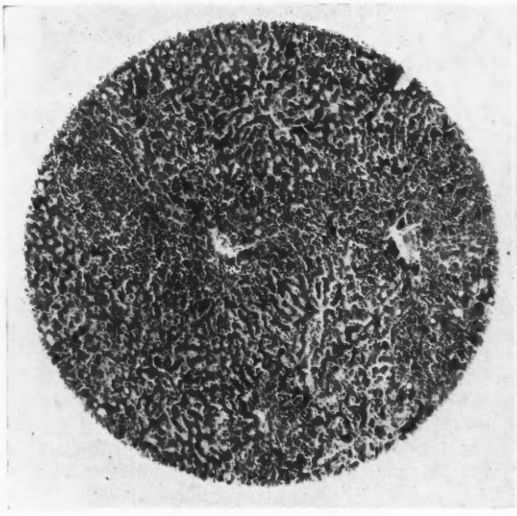


Fig. 1

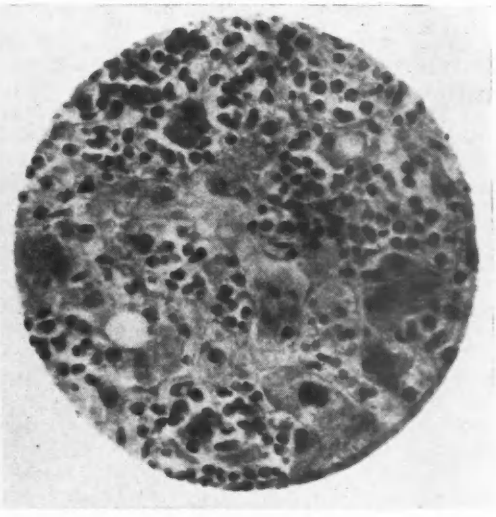


Fig. 2

Fig. 1.—Section of liver demonstrating irregular areas of marked polymorphonuclear leukocytic infiltration. H. and E. stain. X 100.

Fig. 2.—Section of liver demonstrating necrosis of liver cells, leukocytic infiltration, and hyalin, eosinophilic masses. H. and E. stain. X 500.

Ten days later his temperature rose suddenly to 102.5 degrees Fahrenheit; his chest filled with râles. He died within a few hours.

Autopsy.—(39—152). Autopsy was performed forty-four hours after death by Dr. M. Miller of the Stanford University department of pathology:

The body was poorly nourished. The mucous membranes were pale. No jaundice was noted. There were dense fibrous adhesions in the pleural cavity at both lung apices and at the left base. Throughout both lungs there was much hyperemia and many small, grayish, patchy areas of consolidation. The bronchi contained thick mucopurulent material. The peribronchial lymph nodes were large, firm, and anthracotic. The heart and vascular system were normal, except for moderate arteriosclerosis.

The liver margin extended five centimeters below the xiphoid process. The omentum was adherent to the surface of the liver. There were dense fibrous adhesions between the diaphragm and liver, and others binding together the omentum, gall-bladder, duodenum, and hepatic flexure of the colon. The liver measured 27 by 19 by 8 centimeters. The capsule was thickened, pale, fibrous, being two millimeters thick in some areas. The liver was cut with very little increase in resistance. The tissue was pale, mottled yellowish-brown.

The bile ducts were patent. The gall-bladder was displaced to the right, contained 20 cubic centimeters of thin greenish-brown bile. There was a slight deposit of cholesterol on the mucosa.

The spleen measured 12 by 8 by 4 centimeters, had a thin, opaque, fibrous capsule, which was firmly adherent to the diaphragm. The pulp was purplish-red, soft, and mushy.

The remaining organs demonstrated no important lesions.

Histological Examination.—(Dr. A. J. Cox.)

The liver showed very irregular, fairly well-localized areas of marked polymorphonuclear leukocytic infiltration throughout the section. There were in these regions a few large mononuclears, but practically no other inflammatory cells. These zones had no constant relationship to the liver lobules. In the affected areas some liver cells were absent; others were shrunken and contained poorly stained or unstained nuclei. Some showed irregular confluent eosinophilic hyaline masses in the cytoplasm. In these areas there were also cells resembling fibroblasts in more than usual numbers, but there was no significant deposit of collagen. The intervening areas of liver tissue were composed of normal-appearing cell cords, separated by slightly widened sinusoids. A few of the cells, particularly at the periphery of the lobules, contained large vacuoles.

The spleen showed moderate hyperemia of the pulp, which contained numerous polymorphonuclear leukocytes. Many large mononuclear cells contained clumps of yellow-brown pigment granules. No evidence of reticulum hyperplasia was seen.

A section of the lung showed many alveoli filled with an exudate in which were polymorphonuclear, leukocytes, and hemosiderin-laden phagocytes.

Sections of heart, aorta, kidney, adrenal, and pancreas showed only changes associated with arteriosclerosis.

The anatomical diagnoses were:

1. Hepatitis, acute.
2. Bronchopneumonia.
3. Arteriosclerosis, generalized.
4. Perihepatitis, chronic.
5. Perisplenitis, chronic.
6. Hypertrophy of prostate, mild.

COMMENT

There is a great deal known about the clinical and anatomical pictures of advanced cirrhosis and a considerable amount about milder grades. With regard to the origin of this fairly common disease, however, there is still an unpenetrated fog of ignorance. According to Bloomfield,[2] there is a successive chain of events, leading from the mildest catarrhal jaundice (or toxic hepatitis) to the most advanced cirrhosis in the same way that acute and chronic glomerular nephritis are related. Acute yellow atrophy falls into this general classification of liver inflammation as the acute fulminating process which corresponds to "malignant hypertension." Toxic hepatitis when present may clear entirely or pass into a latent stage; but, if it is later to become cirrhosis, becomes periodically lighted up enough to cause further liver damage. It is, however, true that the rare cases of toxic hepatitis which come to autopsy show a cloudy swelling of the parenchyma as a whole, and no evidence of cellular reaction of the type and distribution of cirrhosis.

2 Bloomfield, Arthur L.: In Musser, Internal Medicine, second edition, 1934.

The case which has just been presented demonstrates little to mark it off clinically. In the history, weakness of five weeks' duration without adequate explanation was the outstanding symptom. With this were loss of weight and dyspnea. There was a daily intake of one pint of liquor over an extended period. The physical examination showed weakness, dental caries, a smooth large liver, but no jaundice. There was an anemia with a high color index.

Pathologically, there is an acute inflammatory reaction located in irregular zones which have no constant relationship to the liver lobules. Such an arrangement is found in the chronic inflammatory reaction and fibrosis of hepatic cirrhosis. The necrobiosis found is similar to that of cirrhosis. The irregular coarse hyaline meshwork, staining deeply with eosin and representing a degenerative change in the cytoplasm of the liver cells (see Fig. 2), was described by F. B. Mallory[3] as characteristic of alcoholic cirrhosis.

This case is, therefore, proposed as an example of acute hepatitis without jaundice, and as representative of the initial stage of Laennec's cirrhosis of the liver before any fibrosis has developed. If one or more attacks of nonicteric hepatitis may precede cirrhosis, it is understandable that many patients may reach the stage of a hard liver with hematemesis or ascites without having been previously recognized. It is suggested that hepatomegaly, particularly when accompanied by marked weakness and a macrocytic type of anemia, be given consideration even in the absence of jaundice.

SUMMARY AND CONCLUSIONS

A case of acute diffuse hepatitis with no jaundice is described. The patient died without other factors adequate to consider as responsible for the death excepting a terminally appearing bronchopneumonia. Histologically, in addition to the acute inflammatory reaction, there were present in large numbers the cells described by Mallory as characteristic of Laennec's cirrhosis. This case is regarded as the initial stage of cirrhosis of the liver.[4]

490 Post Street.

FOOD HANDLER EXAMINATIONS*

FINDINGS IN 4,386 PERSONS, YEARS 1931-1936 INCLUSIVE

By J. C. GEIGER, M.D.
San Francisco

SINCE the rôle of the human carrier has been clearly shown in infections such as typhoid fever, and in intoxications such as food poisoning, it would appear that there was ample justification for the search for the carrier state among food handlers as a preventive or control measure. On careful consideration of the problem, however, it is seen that the routine examination of all food handlers presents certain definite difficulties.

HUMAN CARRIERS

The carrier state is frequently one of intermittency rather than constancy. Unless the specimens are obtained under well-regulated circumstances, the possibilities of falsification of source are manifestly a possible and, indeed, a probable source of error. The cost of the medical and laboratory examination, if properly carried out to include all possibilities and follow-up, is probably greater than the results of such a search warrant. The expense of setting up a departmental organization so that the examination may be more nearly uniform and standardized, is considerable, and official agencies cannot easily demand a fee for such a service unless the scope of the examination is extended to include the desirable points of the periodic health examination. In the population centers, particularly, such a practice would assume proportions approaching certain types of state or social medicine, and such a program should be avoided. On the other hand, the individualism of medical practice could not supply the public health official with uniform interpretation of findings, and the practice of accepting privately practicing physicians' certificates would not afford the desirable uniformity of standards. The inclusion of privately operated laboratories, with a certain amount of individualism in technique, also complicates the reliability of the data furnished from nonofficial sources and increases the complexity of the entire program.

EXAMINATION PROCEDURES

The examination of food handlers is usually conducted as of two phases: the medical or physical, carried out by a physician; and the laboratory, carried out on appropriate specimens, presumably from the subject examined by the physician. It is unnecessary to point out the importance of a history, not only of the recent past, but of the life period; but it should be mentioned that the historical data usually ascertained are probably of little value, due to hurried, semipublic inquiry.

MEDICAL EXAMINATION

The medical examination alone, no matter how carefully it is made, reveals little evidence of the most important carrier state to be found or eliminated, that of the enteric fevers. It is essential, therefore, that the medical examination be augmented by appropriate laboratory examination of suitable specimens. As a guide to special investigations, as roentgenologic studies in the diagnosis of pulmonary tuberculosis in selected instances, the physical examination is of importance; as a means of detecting the carrier of food-poisoning organisms, however, its value is almost negligible.

LABORATORY EXAMINATIONS

The laboratory examination, of itself, offers a greater field of usefulness than the medical examination alone. To be of value, however, the speci-

---

[3] Mallory, Frank B.: Cirrhosis of the Liver—Five Different Types of Lesions from Which It may Arise, Bull. of Johns Hopkins Hospital, 22:69-75, 1911.

[4] I desire to express my appreciation of the aid by Dr. Alvin J. Cox of the Stanford University Department of Pathology.

* From the Department of Public Health, City and County of San Francisco.

mens to be examined by bacteriologic or other methods should be from bona fide sources, should have been obtained under controlled conditions, and should be delivered at the laboratory as soon as possible, in good condition, properly labeled. If these circumstances obtain, the results of the laboratory work have definite and important significance; if they do not obtain, the results of the most careful work of the laboratory are subject to criticism and question. The methods used in the laboratory should be standardized to assure uniform technique, but it is to be remembered that the procedures of a decade ago are not suited to present-day requirements.

The number of specimens submitted for examination should be minimized, yet it is desirable to obtain the maximum amount of information from the study of the specimens furnished. If the routine specimens are few in number, it is obviously more nearly possible to obtain them from bona fide sources. While food may serve as a means of transmission in diphtheria, septic sore throat, pulmonary and gastro-intestinal tuberculosis, and possibly other diseases involving the secretions of the respiratory and upper respiratory tracts, the most important sources of infection in typhoid fever involve the feces and urine.

EXCRETA EXAMINATIONS: SAN FRANCISCO FINDINGS

Since 1931 the San Francisco Department of Public Health has examined bacteriologically the excreta of certain types of food handlers, especially the employees of dairies. In addition, the Department of Public Health initiated and partly financed, in coöperation with the George Williams Hooper Foundation of the University of California, an investigation of employees of hotels, clubs, and restaurants for the detection of the carrier state of amebic dysentery. These do not, however, include such individuals about whom the Division of Epidemiology has elicited information that placed them under suspicion as carriers. The number of persons of the first group, which consisted mainly of the employees of dairies, was 3,314. The excreta of these were examined over a period of six years from 1931-1936, inclusive. It may be of interest to note that the examinations were performed by the same laboratory staff and under a standardized technique. Of the persons so examined, 3,314, none were found to be carriers of the typhoid-paratyphoid-enteritidis group of organisms. This uniformity of negative results has focused attention to this not inconsiderable item of expense, and by administrative executive order such examinations, as a routine procedure, have been discontinued. The results obtained in the second group, namely, the examination of the excreta of employees of hotels, clubs, and restaurants for carriers of amebic dysentery have been published by Iverson and Johnstone.[1] The number of carriers found was 2.04 per cent of the persons examined, 1,072. The percentage of positive carriers found (2.04) did not justify, in the opinion of the Department of Public Health, the continuance of the investigation, particularly since a complete cross section of the food-purveying establishments in San Francisco was represented, and especially when the incidence of the reported cases of amebic dysentery showed no elevation over the normal expectancy nor any appreciable diminution. Whether food handlers on ships, in hotels, clubs, and restaurants should be examined as a prerequisite to employment, is open to argument. It would seem more rational that physicians report their cases of amebiasis more promptly, and that the Department of Public Health, as the official agency, investigate the probable source of infection with diligence and intelligence, and arrange for the immediate removal of the carrier from food-handling, with surveillance over his or her future activities.

[1] J. A. M. A., Vol. 108, No. 11 (March 13), 1937.

COMMENT

Modern public-health practice probably includes a number of activities, the continuation of which, if based on close scrutiny of actual results and their bearing on the preservation of the public health, could not be justified. It is admitted that, ideally and theoretically, there is justification for the routine medical and laboratory examination of food handlers, but it is believed that the effectiveness of the measure, at least as it is carried out in present-day practice, is questionable. If the medical and laboratory examinations are conducted in a manner that will offer reliable information concerning the food handler, the true cost, even though the principles of mass production may be in operation, will be more or less prohibitive.

It is quite possible that the amount of money spent on the routine medical and laboratory examination of food handlers, were it spent judiciously in educational activities, augmenting the active and well-developed regulatory and supervisorial food inspection service, would be more prolific of actual prevention of disease. It should be emphasized, also, that the food inspection service should include not only the careful and detailed inspection of the physical environment and inspection of the food and food products, but, of equal importance, the technique followed in the preparing, holding, and serving of food.

IN CONCLUSION

1. The physical and laboratory examination of food handlers, to be effective, should be complete and frequent, with emphasis on the carrier state as related to the enteric fevers particularly.

2. The routine physical and laboratory examinations by the official public health agency of all food handlers, since the study must be complete and frequent to be of appreciable value, is not justified by the results obtained, at least in San Francisco. The same money spent in rational educational activities would probably produce more tangible results.

101 Grove Street.

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

ACUTE NONINFECTIOUS BURSITIS

I. SYMPTOMS

LE ROY C. ABBOTT, M.D. (384 Post Street, San Francisco).—The bursae are synovial sacs lined with a delicate layer of endothelium. As a rule, they are situated near the joints and at the intersection of muscles or tendons, also at points where muscles or tendons move over a projecting portion of bone. The endothelium-lining cells secrete synovial fluid, which acts as a lubricant and reduces friction during motion. Some of the bursae, such as the subacromial and the prepatellar, are constantly present, while others, such as the bursae lying over a bunion or over a kyphos in a tuberculous spine, are adventitious and develop as a result of continued irritation.

The bursae are similar in structure to the synovial membrane of joints and are subject to corresponding types of disease. In this discussion we shall include only the symptoms which occur in the acute noninfectious type of bursitis. It should be borne in mind that chronic or subacute bursitis is more common than the acute form. For example, chronic inflammation of the olecranon and prepatellar bursae occurs much more often than the acute involvement of these bursae.

Acute noninfectious bursitis may be the result of direct injury. The injury is followed by swelling, increased heat and tenderness localized to the area of the bursa. There is additional secretion of fluid within the bursa, at times producing fluctuation. Generally, the process subsides rapidly with rest. Repeated injuries of a minor nature, often incident to occupation, may cause acute bursitis. This type of traumatic or occupational bursitis is the most frequent noninfectious lesion of the bursa.

While there are numerous bursae around such joints as the shoulder, elbow, hip and knee, ordinarily there are only certain ones which frequently become the seat of inflammation. These are the subacromial, the radiohumeral, the olecranon, the iliopectineal, the trochanteric, the ischiogluteal, the prepatellar, pretibial, and the retrocalcaneal bursae. The symptoms which are common to all of them, as a result of inflammation, are pain, localized tenderness, swelling and occasionally fluctuation. Any movement which increases friction of the bursal walls becomes limited and painful; other motion is comparatively free. This condition is always characteristic of an extra-articular lesion.

In some of the more deeply situated bursae, these symptoms may be difficult to elicit. The diagnosis is influenced by the supposition that a bursitis exists because of the location of tenderness and pain. At times a positive diagnosis can be made only by aspiration or operation.

In all questionable cases the physician must have in mind the possibility of a localized periostitis, or an injury to ligaments or tendons. For example, though some cases of so-called "tennis elbow" may be due to inflammation of the radiohumeral bursa, others may be traced to localized inflammation of the periosteum, a condition known as epicondylitis. Also, symptoms not infrequently arise in "tennis elbow" from a tear of the common tendon of the origin of the extensors of the wrist and fingers.

Of all forms of acute bursitis, that which affects the subacromial bursa is the most common and the most distressing. It may be caused by a direct blow on the shoulder or it may be due to occupational trauma, and is seen most frequently in people whose employment necessitates working with the arm in abduction. In this group, the bursitis is secondary to the injury of the underlying tendons. As Codman has pointed out, there may be minute ruptures of the supraspinatus which produce a tendonitis and a resultant inflammation of the bursa. In other instances the acute inflammation may be due to repeated irritation over a calcified deposit in any of the tendons comprising the musculotendonous cuff, particularly the tendon of the supraspinatus.

While the occurrence of such deposits in the shoulder has become familiar, it is not sufficiently recognized that similar deposits of calcium may occur around other joints and give rise to inflammation, as indicated by Dr. Harold Hitchcock in his paper on "Celcium Deposits About Joint."

In cases of acute subacromial bursitis, the patient generally recounts a history of discomfort before the onset of the acute attack. Men frequently complain of pain when putting on their coats, women have trouble in doing their hair. There is a painful catch on abduction and rotation of the shoulder joint. This symptom is often the first indication of a calcified deposit in the tendon of the supraspinatus muscle.

If the patient is observed during this stage, the examiner will find a disturbance in the scapulohumeral rhythm. Normally, in abduction of the arm the movement of the scapula on the thorax and the motion at the scapulohumeral joint are carried out simultaneously in perfect rhythm. In affections of the subacromial bursa there is gross disturbance of this rhythm. The patient attempts to avoid motion at the scapulohumeral joint and, as a consequence, elevation of the arm is almost entirely carried out by rotation of the scapula on the chest wall. When the arm has reached a position of right-angle abduction there is usually a painful hitch, and complete elevation is then obtained only by abduction and external rotation at the scapulohumeral joint. This disturbance of rhythm is immediately apparent when both arms are elevated and the patient is observed from behind.

As the inflammation progresses, with more diffuse involvement of the bursa, the patient complains of extreme pain over the summit of the shoulder. The arm is fixed at the side by intense muscular spasm, and swelling occurs in the region of the bursa, the tenderness is excessive and includes the entire bursal area. The movements of rotation and abduction are completely restricted, though flexion and extension are relatively free. In cases of some duration there is atrophy of the muscles of the shoulder girdle, especially the supraspinatus, infraspinatus and the deltoid.

In many instances this condition is accompanied by pain in the neck, arm, forearm and hand along the distribution of the median and ulnar nerves. Almost invariably pain is referred to the insertion of the deltoid. Frequently there is a thickening of the deltoid fibers in this region, a finding which may be due to intense muscular spasm. With these neuritic symptoms one frequently observes swelling of the back of the hand and forearm, inability to extend the elbow and carry out complete range of motion of the fingers.

Roentgenograms should be taken to ascertain the presence of calcified deposits if they exist. The best of technique must be employed and the exposures taken from various angles; otherwise, these deposits may escape observation.

As Codman points out, the cardinal symptoms of subacromial bursitis are pain, limitation of motion, muscular spasm and atrophy, any one of which may predominate.

In conclusion, I know of no better way of emphasizing the fact that this lesion is of frequent occurrence, and is often confused with other conditions, than to quote the following paragraph from Codman's valuable book, "The Shoulder":

"The cases which are to be discussed in this paper are by far the most common lesions of the shoulder joint. It is the writer's experience that more patients seek hospital treatment for lesions involving the subacromial bursa than for all other lesions of the shoulder joint, including tuberculosis and fractures, added together." "Not only is this true, but it is also true that more cases of subacromial bursitis seek hospital treatment than all the cases of the supposedly more common forms of bursitis, such as 'miner's elbow,' 'housemaid's knee,' and 'weaver's bottom.' In those clinics in which these statements are apparently not true it will be found that these cases are passing unrecognized under the diagnoses of brachial neuritis, periarthritis, muscular rheumatism circumflex paralysis, contusion of the shoulder, fibrous ankylosis, gout, rheumatism and other vague terms."

* * *

II. DIAGNOSIS AND PROGNOSIS

T. E. P. Gocher, M.D. (220 Montgomery Street, San Francisco).—A noninfectious bursitis is an inflammation of the sac of a bursa from other causes than infection, such as from trauma, systemic conditions or irritation of the area of the bursa. This inflammation may be limited to the sac itself or, later, may spread involving the surrounding tissues.

Diagnosis.—The symptoms of a bursitis are usually localized pain over a bursal area; tenderness to pressure or motion; swelling to varying degrees; limitation of function of the part and at times fluctuation. If the correct diagnosis is not made at first, the inflammation may spread and involve nerves, muscle tissue or the tissues of a joint. This spreading is usually in the form of a fibrosis. The tenderness is localized at first over the area of the bursa and later, depending upon the degree of inflammation, may spread and become generalized over the area. When this occurs the difficulty in diagnosis is greater.

In studying fifty cases of noninfectious bursitis in workers, and taking special care to study out the areas involved in the spreading of the inflammation, it was found that:

(*a*) There was no spreading in 30 per cent of the cases.

(*b*) The inflammation spread in 70 per cent and involved:

1. The joint capsule in 20 per cent.
2. Soft tissues in 46 per cent.
3. Muscle tissues in 20 per cent.
4. Nerve tissues in 14 per cent.
5. Neighboring bursae in 6 per cent, especially in the shoulder area.

This made diagnosis more difficult, requiring careful study in order to obtain the best results with treatment.

In studying twenty-four cases of prolonged disability, and treating each for a "bursitis" with excellent results, the following diagnoses were found:

(*a*) "Arthritis" in 8.3 per cent of these cases.
(*b*) "Neuritis" in 25 per cent.
(*c*) "Myositis" in 54.7 per cent.
(*d*) "Sprained joint" in 12 per cent.

X-rays will rule out any bone disease or fracture or dislocation. At times, there may be found calcareous deposits, or melon-seed bodies in the area of the bursa. These are usually in the floor of the bursa or beneath it in the soft tissues. They may or may not cause symptoms such as tenderness.

A noninfectious bursitis may be painful, but have no marked redness or "heat" in the area. Fluid may develop, and in some cases quite suddenly, and tenderness may also appear. This tenderness may be the chief or only symptom outside of the discomfort of swelling.

The following conditions should be considered when making a differential diagnosis:

(*a*) Periarthritis or an arthritis, especially at the shoulder.
(*b*) Neuritis, especially in the hip area.
(*c*) Myofascitis or a myositis, especially in the hip area.
(*d*) Phlebitis, especially at the knee area.
(*e*) Periostitis.
(*f*) Fracture.
(*g*) Sprained joint.
(*h*) Osteochondritis deformans.
(*i*) Osgood-Schlatter's disease.

One or more of these conditions may be present, but if a "bursitis" is the primary cause, then this condition should be recognized. It should also be remembered there is always danger of infection

occurring in this type of bursitis. Luckily, the percentage is not high.

A bursitis of this type may become chronic before recognized or the patient reports to the doctor. Then, frequently, the walls of the sac have become thickened and the fluid contents of the sac also thickened. In these cases there is often a "clicking" on motion of the area. Many of these bursae cause no symptoms outside of the "clicking," and may be present months or years before some condition draws attention to this "clicking." This type is frequently found in the shoulder area.

Prognosis.—The prognosis of a bursitis depends on the age of the patient. The younger patient usually gets well faster. The exact "cause" of the bursitis is another important factor. For instance, if due to irritation, and diagnosed early, then when the irritation is removed the symptoms of the bursitis will often readily disappear. A "first attack" usually reacts to appropriate treatment very well, while an aggravation of a chronic condition may have treatment greatly prolonged, especially if the cause of the bursitis is from the general systemic condition.

When the bursitis is not recognized at first and spreading of the inflammation ensues, then the disability is in the most instances prolonged.

Prognosis is always best if the patient reports early and the condition recognized from the first. The shoulder and hip bursae, and at times the bursae of the heel, are usually the worst offenders in prolonged treatment, while the elbow and knee areas readily react to treatment unless complicated.

It should also be remembered that a chronic bursitis with "clicking" may cause no disability whatsoever outside of the mental effect of the "click." This type is usually difficult to treat; but unless active symptoms such as pain or tenderness are present, it often requires no treatment. Many people have "clicking" in their joints and especially the shoulder, and live most of their lives with this condition and yet have no symptoms.

The prognosis of a bursitis, on the average, is good. The patients practically all will react to appropriate treatment, and only when complications are present should the treatment be prolonged.

* * *

III. TREATMENT

CHARLES S. ROLLER, M.D. (Woodland Clinic, Woodland).—The most frequently troublesome bursae, in our experience, are the prepatellar, the subdeltoid, the olecranon, the radiohumeral, and some of the bursae situated posterior and lateral to the upper tibia, and fibula and lower femur. Other bursa that I mention, only that they may be kept in mind, are these: The iliopectineal, trochanteric, numerous gluteal bursae, and bursae near the shoulder joint and scapular region other than subdeltoid bursae. As is well known, some of these bursae may be present in one individual and absent in another, and they vary considerably as to size.

Bursae are situated anatomically between moving tissue planes so that these tissues may more easily move or glide over each other. They also act very materially as protective cushions to the underlying and overlying parts.

Assuming the diagnosis to be properly made, which is usually not difficult, and granting that we are not dealing with purulent or infected bursae, I believe that the following points in the management of these cases are worthy of note.

Treatment.—Credit for this method of treatment should be given entirely to Weeks and Delprat,[1] as outlined in their article of several years ago.

In this brief discussion, emphasis will be laid upon novocain infiltration, aspiration, and multiple puncture of acute noninfectious bursa. For the past few years this type of diseased bursa has been treated by us as follows: The skin is surgically prepared and draped, a little 2 per cent novocain injected into the skin immediately over the bursa and, with a longer needle, the bursa is thoroughly anesthetized and infiltrated with 2 per cent novocain. Then, with a rather large caliber needle, 16 gauge, and through the same skin puncture, the bursa is entered and all exudate possible aspirated. With the same needle twenty to thirty punctures are made into the bursal sac, without withdrawing the needle from the skin, and with the puncture holes extending over the entire bursa. The needle is then withdrawn and a small square of sterile gauze secured with adhesive over the puncture hole in the skin, and left in place forty-eight hours. This procedure usually gives almost immediate relief from pain, and motion of the parts that was extremely painful before injection and multiple puncture is now relatively painless. The most probable explanation of the pain relief by this treatment is release of intrabursal tension, which is of more or less lasting degree because the many puncture holes allow drainage into the surrounding tissue, and absorption for a considerable time. Also, undoubtedly vascularization is increased in the bursa and adjacent tissues by the multiple punctures and the process of healing.

The most spectacular relief of pain probably occurs in the subacromial cases. These patients are radiographed with the humerus in internal and external rotation. If the bursa can be visualized, as is often the case because of calcareous content, the entire procedure is carried out with strict surgical asepsis under fluoroscopic control. By this means the large needle can be accurately guided into the bursal sac, novocain anesthesia accurately placed, and multiple punctures carried out under direct fluoroscopic vision. In three cases we have been able to break up the calcareous deposit with the large needle and, by using a little sterile saline, have also been able to aspirate the greater part of it. Material of this type that we have been able to withdraw is whitish in color, rather soft, and of putty-like consistency. This procedure is well worthy of trial in any bursa with a calcareous deposit. However, whether or not the deposit can be broken up and aspirated seems to have little effect upon the cure of the patient, as far as the immediate acute attack is concerned. Deposits do sometimes disappear spontaneously, or after multiple puncture,

[1] Weeks, Alanson, and Delprat, G. D.: Subdeltoid Bursitis (Acute), Internat. Clinics, 3:40-48, (Sept.) 1936.

as shown by subsequent radiographs of the region. After this is done the parts are placed at rest. This is accomplished by various means, depending upon the location of the bursa. A sling is usually sufficient in the subdeltoid cases. Adhesive strapping, elastic bandages, and splints are used as warranted. In only very severe cases is hospitalization necessary. Sedation may be required, depending upon the degree of pain, from mild analgesics up to morphin if necessary. General systemic measures, plenty of fluids, and elimination are important. Usually patients are able to return to work in from three to seven days after treatment, but occasionally it may take a little longer. We have completely disregarded traction and absolute immobilization as methods of treating acute noninfectious bursae.

During convalescence hot applications, dry heat, or diathermy to the parts are aids to recovery, and are used daily in severe cases. This treatment many times increases pain if carried out before injection and multiple puncture. Active motion of the part is encouraged by degrees as soon as the pain has disappeared and only soreness, stiffness, or mild pain on motion remain. Very light massage is sometimes helpful.

If the above measures fail after a reasonable trial, which in our experience certainly is very infrequent, or if recurrence of the bursitis is troublesome, excision of the bursa is done. In the olecranon and prepatellar cases this is possibly carried out earlier than the others, because of the accessibility of the bursa and the simplicity of the operation necessary to effect a permanent cure. Considerable care must be exercised in the excision in order to be certain that the bursal sac is entirely removed. After exposure of the sac a small needle is inserted into the bursa and the entire interior stained by injection with methylene blue. This greatly minimizes the danger of leaving part of the bursal sac. Bursae may have multiple compartments, and it is easy at times to do an incomplete operation if care is not exercised. At times, too, even methylene blue staining may not penetrate to all of the compartments, so that thorough exploration of the region of the bursa is done before closure, even though we feel that all of the sac has been removed. Recurrence of the trouble after excision of a bursa, or a wound which does not heal per primam are almost certainly due to incomplete excision. Excision of subdeltoid or radiohumeral bursae is more technical, but likewise gives a permanent cure if properly carried out. As is well known, calcareous deposits in subacromial bursitis may be found mainly in the tendon of the supraspinatus muscle, and the consensus of opinion seems to be that they may originate there, and later penetrate into the bursa.

Occasionally a change in occupation is necessary in chronic irritation and recurrent occupational bursitis, unless total excision of the bursa is done.

In conclusion, we wish to emphasize the following points:

First, that by this method of treatment in cases of noninfectious bursitis, our patients are disabled for a much less length of time than formerly, they suffer a great deal less pain, and cure seems fairly permanent. We have done very few excisions in the last few years.

Second, we wish to emphasize the importance of accuracy in placing the novocain infiltration to insure a painless operation, and in covering as much of the bursal sac as possible with puncture holes, made with a large caliber needle.

Third, if excision of the bursa is ultimately necessary, care must be exercised that complete removal is done.

Fourth, in the deep-seated bursa it is always advisable to fluoroscope the patient and have a film made of the part because, if calcareous deposits are present in the bursa, localization can be done exactly, and the procedure can be accomplished under fluoroscopic vision and control.

Fifth, in some of the bursae uncommonly affected by this disease we have found it well worth while to refresh our memories as to their location, by study of the anatomy of the region before attempting novocain infiltration, aspiration, and multiple puncture.

The Undergraduate Teaching of Obstetrics: Chairman's Address.—E. D. Plass, Iowa City (*Journal of the American Medical Association,* August 27, 1938), points out that, generally speaking, it may be said that the didactic teaching of obstetrics in the medical schools of the country is as adequate as that of any other major clinical subject. Textbooks are well written and authoritative, and the instructional staffs are progressive, interested and alert. The problem of practical training is more difficult to evaluate and from the statistical approach it seems almost insoluble. Pregnancy and parturition are essentially physiologic in character, with the major life-threatening complications of such infrequent occurrence that only the larger hospital centers can have anything approaching an adequate experience. The teachers of obstetrics realize the futility of attempting to make obstetric specialists out of undergraduates, and yet their critics are, at least by implication, insisting that this should be an objective of the instructional staffs. No other medical subject is taught with so much attention to preparing the student for actual practice as is obstetrics, and yet the others are not subjected to so much adverse criticism.

Health of the Migrant.—Walter M. Dickie, Sacramento, California (*Journal of the American Medical Association,* August 27, 1938), states that in 1936 and 1937, approximately 100,000 individuals seeking manual labor entered California by automobile each year, nearly 260,000 having arrived in two and one-half years. More than 57 per cent of these migratory laborers came from the Southern Middle Western states of Oklahoma, Texas, Arkansas, Missouri, Kansas, and Arizona. California, in coöperation with federal agencies, has controlled communicable diseases among these groups, no major epidemics having occurred. Services included child and maternal hygiene, diagnosis of tuberculosis, public health nursing, education in nutrition, including selection and preparation of proper foods, provision of housing facilities and general public health services. Study of conditions among these laborers revealed their greatest need—that of education in the hygiene of proper living. The amalgamation of this army of underprivileged people into the social life of California requires the coördinated efforts of social welfare, relief, medical, nursing, public health and administrative workers among local, state, and federal agencies. In public health administration there are no state border lines so far as migration is concerned and no direct effort can be made forcibly to bar entrance of migrants into California. In administering public activities to control these migrant groups, full recognition, first of all, was given to their status as human beings and, with public health as a driving force, provision was made not for prevention of disease alone but for medical and nursing care, relief, and housing facilities.

CALIFORNIA MEDICAL ASSOCIATION

This department contains official notices, reports of county society proceedings and other information having to do with the State Association and its component county societies. The copy for the department is submitted by the State Association Secretary, to whom communications for this department should be sent. Rosters of State Association officers and committees and of component county societies and affiliated organizations, are printed in the front advertising section on pages 2, 4 and 6.

CALIFORNIA MEDICAL ASSOCIATION

WILLIAM W. ROBLEE.....President
CHARLES A. DUKES.....President-Elect
LOWELL S. GOIN.....Speaker
KARL L. SCHAUPP.....Council Chairman
GEORGE H. KRESS.....Secretary-Treasurer

THIS MONTH'S TOPICS

ASSOCIATION ACTIVITIES

1. *Special Session, House of Delegates, American Medical Association.*
   Statement of Board of Trustees.
   Report of W. W. Roblee, President of the California Medical Association.
   Resolution introduced by President-Elect Charles A. Dukes.
   Press Comments.
   Report of Reference Committee of the American Medical Association House of Delegates.

DEPARTMENT OF PUBLIC RELATIONS

1. *"State Humane Pound Act."*
2. *Proposed Institutions Commission for the County of Los Angeles.*

SPECIAL SESSION, HOUSE OF DELEGATES, AMERICAN MEDICAL ASSOCIATION*

The calls for the special session of the House of Delegates of the American Medical Association and of State Medical Association secretaries and editors appeared in CALIFORNIA AND WESTERN MEDICINE, September issue, on pages 180 and 221.

The meetings were held Friday and Saturday, September 16 and 17, in the Red Lacquer Room of the Palmer House.

The following items: I. Statement of the American Medical Association Board of Trustees Chairman Booth; II. Resolution introduced by Dr. Charles A. Dukes of Oakland; III. Newspaper Excerpts, (a) (b) (c) and (d); and IV. Official Report of the Reference Committee on Consideration of the National Health Program, give a survey picture of the two-day session of the House of Delegates.

* * *

I

(COPY)

Statement of the Board of Trustees, Arthur H. Booth, Chairman, to the Special Session of the House of Delegates, Chicago, September 16, 1938

For the third time in the history of the American Medical Association your Board of Trustees, in accordance with the power conferred on it by the by-laws of the Association, has called you into a special session. On two previous occasions, once when our country was at war and the services of the American Medical Association were required to provide medical officers for our troops and physicians to aid in the work of the selective service boards, and on another occasion when the Social Security Act was first proposed to the Congress, you were called into special session. The specific purposes for which you have been called on this occasion have been announced to you by the Speaker of the House of Delegates and by the Secretary of the Association.

Following the presentation of the statement of Miss Josephine Roche to the House of Delegates at the San Francisco session, the National Health Conference met in Washington, July 18, 19, and 20. From that conference there emanated, as you already know, a National Health Program, developed by a technical committee, which, in turn, had been appointed by the Interdepartmental Committee on Health and Welfare appointed by the President of the United States. The National Health Conference was a meeting attended by representatives of labor and welfare agencies, medical organizations, social workers, and other groups. The program which is now presented to you was presented to the National Health Conference by representatives of various governmental agencies responsible for the conference and by the Technical Committee that has been mentioned. Little opportunity was given for discussion by those in attendance on the Conference of the specific proposals that were made. The president of the Association, your secretary, the chairman of the Board of Trustees, the editor of THE JOURNAL, the chairman of your Committee on Medical Service, and the chairmen of your Councils on Scientific Assembly and on Industrial Health who were invited individually to participate in the conference, all made clear to the Conference the fact that only the House of Delegates of the American Medical Association is empowered to establish policies and that only the House of Delegates may establish for the American Medical Association a policy relative to the various proposals that were made. In submitting these proposals to you the Board would point out that at the calling of the National Health Conference it was stipulated that no formal action would be taken by that conference. Nevertheless, responsible representatives of the Government have indicated that the proposals made would be embodied in legislation to be submitted to the Congress of the United States when next it meets.

For these reasons, and particularly because the Congress of the United States will be convened before the House of Delegates will again meet in regular session, the Board of Trustees considered it advisable to call this special session of the House of Delegates in order that your representatives may be able to present your point of view as representative of the American medical profession, to the people and to the Congress of the United States and to take such other action as may be deemed necessary to make your views effective.

The Board of Trustees will not at this time read to the House of Delegates in detail the complete text of the proposals or even the abstract of the five chief proposals that have been made. These proposals concern briefly (1) expansion of public health service, (2) increase of hospital facilities, (3) medical care for the medically indigent, (4) a general program for medical care, and (5) a program for compulsory sickness insurance covering the entire population of the United States.

These five proposals, it has been suggested, may well be submitted to five special reference committees of this House of Delegates, each of which will concern itself with the details of one of these five proposals and at the same time give consideration to such alternative proposals for meeting the same needs as may arise from the medical profession itself.

The complete text of the proposed National Health Program was published in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION immediately after the conclusions of the National Health Conference and has thus been made available to the entire medical profession of the country. In order, however, that you may have this material immediately before you, there is now being given to each of

* See also, page 249 for editorial comments.

you a copy of the complete text of the National Health Program to be used in your consideration of this subject.

In submitting these proposals to the National Health Conference the statement was made by various representatives of our Government that it was not contemplated that this entire program would be made immediately effective but rather that there might, over a term of approximately ten years, be developed such a program, according to the "blueprints" offered, so that expansion of medical and public health activities in the United States during the next ten years might follow the definite procedure here outlined. On you, therefore, rests a serious burden—the burden not only of planning for the immediate needs in the field of medical care in the United States, but also for setting forth the policies and views of the medical profession in relationship to medical care and in relationship to this "blueprint."

Your responsibility is great. The medical profession of the entire country awaits anxiously the answer that you will make. Recognizing the manner in which the House of Delegates has in the past accepted the obligation placed on it to represent the point of view of 110,000 American physicians, of whom you are the authorized representatives, we are confident that you will make your decisions calmly, carefully, and with the same sympathetic consideration for the needs of the people of this country that has characterized your actions in the past.

The results of your deliberations as expressed in this special session of the House of Delegates will be the guiding and determining voice for the medical profession, on those whom you authorize to make your voice effective, until the House of Delegates may at some future time determine any other action.

INVESTIGATION BY THE DEPARTMENT OF JUSTICE

Shortly after the termination of the National Health Conference, an announcement was released to the newspapers and to the press of the United States indicating that the Department of Justice of the United States Government proposed to seek an indictment of the American Medical Association as a monopoly, unless the American Medical Association, through its central organization or through its constituent society in the District of Columbia, consented to certain stipulations satisfactory to the Department of Justice in relationship to the nature of medical practice. An investigator from the Department of Justice has consulted some of the correspondence in the headquarters office of the American Medical Association. At no time has an official or unofficial communication ever been received from the Attorney-General of the United States, Homer Cummings, or from his assistant, Thurman Arnold, or from any other representative of the Department of Justice. The Association knows of this matter otherwise only through the statements released to the press.

In response to numerous inquiries that have come to the officers of the Association and to the headquarters, the statement has been made repeatedly that the American Medical Association welcomes investigation by any authorized agency of the nature of its organization, of its methods of work, of the conduct of its affairs and of its activities, firmly reliant on the belief that every action taken by the Association has been in accordance with its constitutional organization in the interest of the public welfare, and for advancing the standards and quality of medical service for the American people; and that at no time has it violated the established law of the federal, state or municipal governments of this country. Moreover, by the very nature of its organization, it has observed constantly the democratic principles on which the government of the United States is founded and maintained.

SOCIAL SECURITY ACT

As this House of Delegates is aware, the American Medical Association is a federacy of its constituent associations, established to promote the science and art of medicine and the betterment of public health. In accordance with the provision of the Social Security Act, an organization of this type is considered to be exempt from those stipulations of the Act assessing taxation. According to the original ruling of a deputy commissioner of internal revenue, the American Medical Association has been until recently exempt from these provisions. It has indeed proposed to establish voluntarily a plan for the security of the employees of the Association, and this plan was approved by the House of Delegates at the San Francisco session. More recently special interpretation of the law has been made by another deputy commissioner whereby the American Medical Association, formerly classified with educational and scientific groups, is now classified as a business league and required under the Act to pay considerable tax covering all its employees. Your Board of Trustees, after careful consideration, has determined to appeal from this interpretation and accordingly has employed special counsel to undertake the handling of this appeal to restore the Association to its original and proper classifications as a scientific and educational organization. The appeal made by your Board of Trustees is not an attempt to evade the requirements of any legislation enacted by the Congress of the United States. We have in the past conformed fully to every law, and it is our purpose that we shall continue to conform to the law if, as and when it may be established by the courts of the United States that the interpretation of the law by various governmental agencies is in accord with the opinion of the courts that this is the law.

* * *

Report of President Roblee

Concerning Special Meeting, House of Delegates American Medical Association, Chicago September 16 and 17, 1938

To the Council, California Medical Association:

Your president attended this meeting ex officio as an observer and adviser to the delegation. The fact that this was only the third special meeting called in the history of the House testifies to the importance attached to it by the Association. The official call specified that the session was limited to the consideration of the national health program submitted to the National Health Conference recently held in Washington, and to such other matters as might be submitted by the Board of Trustees. The first day was given over to the usual line of official speeches by the elected officers, the appointment of reference committees, and the submission of a shower of resolutions and plans by states, county societies, and individuals, all guaranteed to solve the complex problems of medical economics brought forward by the Health Conference report.

I could detect nothing new or startling in the addresses of the officials; they restated our attitude on the pending questions in a very fine way and served to while away a pleasant hour or more.

We were very much interested in the appearance before the House of some officials of the National Medical Association, which is the national organization of negro physicians, having a membership of five thousand negro doctors. One of their past presidents, Doctor Giles of Chicago, stated that at their annual meeting held at Hampton, Virginia, in August, they were visited by representatives of the Federal Government, who spoke to them in the interest of certain plans which were proposed to be introduced at the coming session of Congress which would lead to the initiation of state medicine in America. Doctor Giles reviewed the problems presented by the negro people. Their House of Delegates was not bewitched by the siren voice of socialized medicine and he pledged as follows: "In conclusion, may I say that we lend to you our support and our sympathies in the struggle that you have against the forces arrayed against you and promise you that, as far as humanly possible, we will give you our undivided strength." This coming from a group of citizens who have felt more keenly than any other the economic stress under which our nation has been laboring is indicative of the good judgment and desire to coöperate on the part of our colored colleagues, many of them living in sections where American Medical Association membership is denied them.

Our delegates went to the meeting uninstructed. On the train going East some of our delegates decided that this was the logical and opportune time to make certain changes in the code of ethics for the purpose of removing certain provisions that have handicapped state or county societies in establishing coöperative medical care by such units of organized medicine, and it was decided to introduce a resolution on the subject.*

*Editor's Note.—Resolution was introduced by Dr. Charles A. Dukes of Oakland and appears in this issue on page 320.

The resolution met with rather general favor, but it was finally ruled out of order by the Speaker and later by the Judicial Council as introducing a subject not involved in the call for the meeting.

This matter should not be allowed to drop. While some of us will be very reluctant to see the California Medical Association in the business of an insurance company purveying medical care, the way should be clear so that we will not stultify ourselves if such a course should become necessary. If the American Medical Association will not adopt such changes in the code, we should change the California Medical Association by-laws and eliminate all reference to the American Medical Association code and write and adopt our own code, as has been done in New York.

The most illuminating address of the meeting was made by Doctor Leland of the Bureau of Economics, wherein he summarized the various plans for medical care now under way in the United States. These are some three thousand in number, and he concluded as follows: "The most fortunate and hopeful feature of this development to provide means by which people may secure medical services lies in the fact that in the United States there has been and is yet the freedom to develop and direct efforts along dissimilar lines. As yet the road has not been closed by legislation to the search for a variety of appropriate ways of distributing medical services. Once that road is closed by legislation it will become increasingly difficult for county medical societies and other organizations to develop the measures that seem most appropriate for the local conditions of widely different communities."

The final report of the Reference Committee on consideration of the National Health Program reached the following conclusions. This is well summarized in an editorial in the JOURNAL as follows:

"Briefly the House of Delegates recommended expansion of public health services as related to the control of certain infectious diseases, maternal and infant welfare and similar projects, with the definite understanding that the need be established and that they be efficiently handled and economically controlled. The House of Delegates approved the principle of hospital insurance, again with the understanding that it cover only the facilities of the hospital and that professional standards be maintained. It approved the principle of cash indemnity insurance for meeting sickness costs, provided these efforts meet the requirement of state laws and that they have the approval of the county and state medical societies under which they operate. The House of Delegates again recognized the need for complete medical service to the indigent, at the same time emphasizing the desirability of local control. The House recognized that the necessity for state aid might arise in poorer communities and that the Federal Government might need to provide funds when the state is unable to meet these emergencies. The needs of the medically indigent were considered and a definition of medical indigence was supplied. Here the House felt that the determination must be made locally as to the group covered by this term, that control of the service should lie with local administration, and that available facilities should be utilized before new facilities were provided. Thus, the House of Delegates felt that there was but little need for the building of new hospitals or the establishment of new diagnostic centers, provided better utilization of hospitals and laboratories already functioning can be devised.

"Again the House of Delegates stated its firm opposition to any compulsory sickness insurance plan. Finally, it approved protection against loss of income during illness."

It is noteworthy that the report was adopted by unanimous vote.

One other subject of interest to us was the endeavor by one of the Conference committees to define medical indigency. I am not certain, as I read the minutes, whether it was officially adopted. It reads as follows:

"A person is medically indigent when he is unable in the place in which he resides, through his own resources, to provide himself and his dependents with proper medical, dental, nursing, hospital, pharmaceutical and therapeutic appliance care, without depriving himself or his dependents of necessary food, clothing, shelter and similar necessities of life, as determined by the local authority charged with the duty of dispensing relief for the medically indigent."

Respectfully submitted,

W. W. ROBLEE.

II

(COPY)

Resolution Introduced by Charles A. Dukes, M. D., Oakland, on Behalf of the California Delegation

WHEREAS, The great complexity and rapid changes in social and economic conditions, and in medical science and practice make it imperative, in the best interests of the people of the United States, to bring into being at an early day ways and means whereby adequate medical care may be given to all citizens, no matter to what income classes belonging; and

WHEREAS, The present organization of the American Medical Association, its constituent state medical associations, and their component county medical societies, is of a type and scope that would permit medical service of the best scientific standard and quality to be given by them in every portion of each state in the Union; and

WHEREAS, Existing ethical and procedure rules of the American Medical Association, its constituent state associations and their component county units, handicap plans designed to give the aforesaid service when the same are promoted, espoused, controlled or owned by constituent state medical associations, or by their component county medical societies, acting singly or in groups; and

WHEREAS, Recent trends and actions by political and other forces and agencies throughout the United States indicate that compulsory health insurance or similar systems that are not in accord with the ten principles adopted by the House of Delegates of the American Medical Association at the Cleveland annual session of 1933, are more than apt to be promulgated and thrust upon the people and the medical profession of the United States; with results that would undoubtedly lead to woeful deterioration in the standards and quality of medical service rendered to the people of our country; and

WHEREAS, Adoption by this House of Delegates, convened in special session in Chicago on September 16, 1938, of amendments to the "Principles of Medical Ethics of the American Medical Association," so worded to permit its constituent state medical associations or their component county medical societies, acting singly or in groups, to provide medical care and service, with or without hospitalization care or service, to citizen groups agreed upon by the before-mentioned state or county medical societies, would greatly aid in the solution of these public health and social problems; and

WHEREAS, It is of paramount importance for organized medicine to at once bring into operation principles and rules that will make it possible for state associations and their component county societies to sponsor or control or own medical care and service organizations as above outlined; and

WHEREAS, The existing "Principles of Medical Ethics of the American Medical Association," as given in Chapter III, Section 4, are so worded that constituent state associations and component county medical societies cannot solicit patient groups of certain income classes for whom more adequate medical service is indicated; the ethical principles as outlined in Section 4 of Chapter III, making it impossible for state and county units to engage successfully in competition with private medical service groups or organizations that have been brought into existence for profit; now, therefore, be it

Resolved, That we suggest that action be taken at the proper time to delete the first sixteen lines of Section 4 of Chapter III, Principles of Medical Ethics, beginning with the words, "Sec. 4—Solicitation of patients" and ending with the words, "has been or is concerned," and in lieu thereof there be substituted the following:

Sec. 4.* Solicitation of patients by physicians as individuals, or collectively in groups, by whatsoever name these be called, or by institutions or organizations, whether by circulars or advertisements, or by personal communications, is unprofessional; *provided, however, that solicitation of patients by a constituent state association or its component county medical societies (the plan of a component county society having first received the approval of its respective*

* Portion of the text in italics, are the proposed amendments to Section 4, or interpretation suggestions thereof.

state medical association), acting singly or in groups, when said solicitation of patients is of an impersonal character and is done in the name of the aforesaid constituted units of organized medicine, and for the promotion of medical service plans controlled by such constituted units, and designed to give more adequate medical care, and service to citizens of certain stipulated income classes, and shall be permissible and shall not be construed as unprofessional. This does not prohibit ethical institutions *or constituted state or county medical society units* from a legitimate advertisement of location, physical surroundings and special class—if any—of patients accommodated. It is *also* unprofessional for physicians as individuals, or collectively, or in groups, *when not acting officially for state or county medical societies, singly or in groups, as before indicated,* to procure patients by indirection through solicitors or agents of any kind or by indirect advertisement. It is *equally* unprofessional for physicians or individuals, or collectively in groups, by whatsoever name these be called, or by institutions or organizations, or *by constituted units of organized medicine as above outlined,* to procure patients by furnishing or inspiring newspaper or magazine comments concerning cases in which the physician *or physicians have been* concerned.

* * *

Excerpts from Minutes of the Special Session—In re: Doctor Dukes' Resolution

In re: Resolution introduced by Dr. Charles A. Dukes of Oakland at the special session of the American Medical Association House of Delegates at Chicago on September 16 and 17. The following excerpts are references thereto, as taken from the official minutes of the session.

* * *

FRIDAY MORNING, SEPTEMBER 16, 1938:

Resolution on Change of Medical Care for the People.

Dr. Charles A. Dukes of California read a resolution on change of medical care for the people, which, the Chairman ruled, was not germane to the call.

* * *

FRIDAY AFTERNOON, SEPTEMBER 16, 1938:

Resolution on Change of Medical Care for the People.

Dr. Charles A. Dukes of California, in behalf of the California delegation, presented the following resolution, which was referred to the Reference Committee on Miscellaneous Business. [Resolution, as printed above, followed.]

* * *

SATURDAY MORNING, SEPTEMBER 17, 1938:

REPORT OF REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS

Dr. W. H. Seeman, Chairman, presented the following report:

"1. . . .

"2. *Resolution on Change of Medical Care for the People.* This resolution embodies a proposed change in the wording of Section 4 of Article I of Chapter III of the Principles of Medical Ethics of the American Medical Association so that it will read as follows:

"Sec. 4. Solicitation of patients by physicians as individuals, or collectively in groups, by whatsoever name these be called, or by institutions or organizations, whether by circulars or advertisements, or by personal communication, is unprofessional; provided, however, that solicitation of patients by a constituent state association or its component medical societies, acting singly or in groups, when said solicitation of patients is of an impersonal character and is done in the name of the aforesaid constituted unit of organized medicine and for the promotion of medical service plans controlled by such constituted units and designed to give more adequate medical care and service to citizens of certain stipulated income classes, and when such plan or plans shall have been approved by the proper constituent state association, shall be permissible and shall not be construed as unprofessional." . . .

"The proponents of this resolution have convinced the Reference Committee that an emergency exists and that any undue delay in the adoption of this resolution might be prejudicial to the best interests of the public and organized medicine.

"Your Reference Committee, finding no established rule contrary to such action, recommends the adoption of this resolution."

The second section of the report was referred to the Judicial Council on motion of Dr. A. T. McCormack of Kentucky, seconded by Dr. Samuel J. Kopetzky of New York, and carried, after discussion.

The report of the Reference Committee was adopted as a whole, with the exception of the second section, which was referred to the Judicial Council, on motion of Doctor Seemann, seconded by Dr. A. T. McCormick of Kentucky, and carried.

* * *

SATURDAY AFTERNOON, SEPTEMBER 17, 1938:

The House reconvened at 2:10 p. m., Saturday, September 17, with Dr. H. H. Shoulders, Speaker, presiding.

REPORT OF JUDICIAL COUNCIL

Dr. George Edward Follansbee, Chairman, presented the following report, which was adopted on motion, duly seconded and carried:

"This is a special meeting of the House of Delegates called on the recommendation of the Board of Trustees to consider matters pertaining to the recent National Health Conference and such others as may be referred to it by the Board of Trustees.

"The subject of the amendment of the Principles of Medical Ethics is not included in the matters for which this special meeting was called nor has it been referred to this House by the Board of Trustees, for which reason the Judicial Council recommends that no action be taken on the resolution."*

* * *

III—Press Comments (a)

American Medical Association Warms Up to Federal Health Plans

A conciliatory attitude by the special session of the House of Delegates of the American Medical Association toward the Roosevelt Administration's $850,000,000 public health program was indicated at yesterday's Palmer House meeting.

While committees studied various proposals, the delegates adopted a resolution endorsing voluntary health insurance, with emphasis on the voluntary feature.

A proposal from the California Medical Association, presented by Dr. Charles A. Dukes of Oakland, to permit medical societies to advertise if the advertising is of an impersonal character, stirred discussion.

At the suggestion of Dr. Samuel J. Kopetzky of New York, the motion was referred to the judicial council.

While the Government's Health Program was studied, Dr. Roscoe G. Leland, Director of the Association's Bureau of Medical Economics, told the delegates thousands of members already are firmly established in the practice of socialized or tax-paid medicine.

More than three thousand medical-aid programs are under way in the nation, he said.

As far as direct government subsidies for medical care are concerned, Doctor Leland added, the farm security administration of the Department of Agriculture is making loans to groups of farmers who organize and hire physicians to care for members of the county organizations. At least five coöperative associations are already hiring physicians without Government aid.—Chicago *Tribune,* September 16.

* * *

III (b)

Doctors Defeat Proposal to Permit Impersonal Solicitation of Patients for Medical Service Plans

Dr. Charles A. Dukes of Oakland, California, threw the American Medical Association's House of Delegates into an uproar at the Palmer House today when he proposed a resolution permitting authorized "medical groups" or units, to use advertising promotion of any project agreed upon.

While agreeing that "advertising by any individual doctor is still unethical," Doctor Dukes insisted it should be allowable for a group of doctors, for instance, to promote through advertising a plan for group medical service. He added:

"This would be of an impersonal nature; the idea is that if a group of doctors could see its way clear to offer low-

* The call for the Special Session of the A. M. A. House of Delegates was printed in CALIFORNIA AND WESTERN MEDICINE, September, 1938, on page 221.

cost medical service, the group should have the right to present this matter to the public."

PROPOSAL VOTED DOWN

The resolution died an early death. Shouted demands that the proposal be submitted to the judicial council, a sort of "supreme court" of the American Medical Association authorized to pass on ethical questions, were granted.

The Dukes "advertising" measure was studied by the Council and then returned to the delegates with a report that it was "out of order and not proper business." The delegates then voted it down without debate.

In conformity with recommendations of officers' committees, the House of Delegates voted to support their trustees "to the utmost" in case of a Department of Justice indictment on monopolistic charges.

They also voted to appeal from the federal classification given them as a business organization, thus making them subject to taxation under the Social Security Act. The American Medical Association wants to remain classified as a scientific medical body.

Tabled for the time being was a proposal to send a request that President Roosevelt name a joint commission, including an American Medical Association group and a National Health Council group, to work out a dovetailed program of medical service. Dr. Thomas C. McGeldrick of Brooklyn pointed out such a plan had been attempted futilely for years.

Dr. Roscoe G. Leland, Director of the American Medical Association Bureau of Medical Economics, told the delegates there are already more than 3,000 medical-aid programs under way throughout the country.

SPONSORSHIP FOUGHT

Doctor Leland said the programs include payment plans endorsed by various local medical societies, and the hiring of doctors, nurses, and hospital facilities by rural coöperative organizations, business concerns, and government organizations.

The committee on the main issue of the convention—the delegates' stand on socialized medical service—had been split into five subcommittees.

The subcommittee on expansion of hospital facilities, said Dr. Holman Taylor of Forth Worth, believes it is better to use the facilities of existing hospitals than to build new hospitals.—Chicago *American*, September 17.

* * *

III (c)

Doctors Adopt Roosevelt's Health Plans

Society Upsets Tradition by Liberal Revision

Chicago, Sept. 17 (AP).—The American Medical Association Saturday upset tradition by adopting revisions in its policy on health and welfare which some members of its House of Delegates termed "progressive and almost revolutionary."

The delegates, meeting in a special session here for the past two days, approved with few dissenting votes or objections five recommendations which agreed in most major principles with the national health program outlined two months ago by President Roosevelt's Interdepartmental Committee on Health and Welfare.

AGREES WITH PREMISE

The committee had declared that the health of the people was a direct concern of the Federal Government. The Medical Association agreed Saturday that the health of impoverished persons should be protected with the use of state and federal funds when necessary.

The President's committee urged establishment of a federal department of health, the secretary of which would be a member of the cabinet. The Association agreed with the provision that "he must be a physician."

On the expansion of public health and maternal and child welfare services, the Association agreed with the committee completely.

The delegates backed the committee in its endorsement of better use of existing hospital facilities, but opposed the building of additional hospitals where they are not needed. They also endorsed plans for hospital service insurance and cash indemnity insurance policies which remunerate a person during prolonged illness.

OPPOSE COMPULSION

They opposed vigorously, however, any plan of compulsory health insurance, contending that it would be "a complicated, bureaucratic system which has no place in a democratic state" because it would lend itself "to political control and manipulation."

The delegates also expressed agreement with the president's committee on plans to compensate workers for loss of wages during illness and urged the expansion of workmen's compensation laws. The certification of a worker for such compensation should not be made by a private physician, however, they added, but by a medical employee of the concern employing the worker.

Officials of the medical profession actively opposed the $850,000,000 tax-paid national health program suggested at the National Health Conference in July.

Saturday, however, the delegates declared, "we advocate recognition of the principle that the complete care of the indigent is a responsibility of the community, the medical and allied professions, and that such care should be organized by local governmental units and supported by tax funds."

ENDORSE STATE PROGRAMS

They added that each state should develop a system to fulfill the recommendations of the National Health Conference when it declared that "the rôle of the Federal Government should be principally that of giving financial and technical aid to the states."

Hospital service insurance should be expanded "along sound lines," the delegates said, suggesting it is particularly adaptable as a community project under which a great many small cities and towns could obtain the benefits of a hospital. Many church, fraternal, and voluntary hospitals would be assured of maintenance, they added, if the cost of care of the medically indigent was returned to them from state or federal tax funds.

The care of the sick in any community is primarily a local problem to be dealt with by the local medical society, relief authorities and similar agencies, one recommendation of the House of Delegates said. It urged each local society to "develop appropriate means to meet local requirements," calling in the assistance of state and federal organizations if such action becomes necessary.

As the meeting closed, Dr. H. H. Shoulders of Nashville, Tennessee, Speaker of the House, appointed seven physicians to meet with a group of physicians of the Federal Government to discuss methods of coördinating health and welfare activities of private and Government medical workers.

Doctor Shoulders named Dr. Irvin Abell of Louisville, Kentucky, President of the Association, as chairman; Dr. Henry A. Luce of Detroit, Michigan; Dr. Frederic E. Sondern of New York City; Dr. Walter E. Vest of Huntington, West Virginia; Dr. Walter F. Donaldson of Pittsburgh, Pennsylvania; Dr. Fred W. Rankin of Lexington, Kentucky; and Dr. Edwin H. Cary of Dallas, Texas.

No date was set for the conference with federal authorities.—Salt Lake *Tribune*, September 18.

* * *

III (d)

American Medical Association Ready to Battle Probe

Chicago, Sept. 20 (AP).—The American Medical Association served notice tonight it would oppose "with its utmost power" any attempt "to convict it in the eyes of the people of being a predatory, antisocial monopoly."

That attitude was outlined in an editorial in the organization's journal in the light of last week's meeting of the House of Delegates, governing body of the American Medical Association.

Commenting on a proposed investigation by the Department of Justice, "which seeks to obtain an indictment of the American Medical Association as a monopoly," the article set forth:

"The statement has been made repeatedly that the American Medical Association is ready for investigation by any

authorized agency, firmly reliant in the belief that its actions are in accordance with its constitutional organization, that they have been taken in the interest of public health and welfare and that it has never violated the established laws of this country."

In Washington today, Attorney-General Cummings stated the projected action was against the District Medical Society—and not against the American Medical Association.—San Francisco *Chronicle,* September 21.

* * *

Medicine Steps Forward

Both physicians and the public cannot but approve the decision of the House of Delegates of the American Medical Association to recede from its previous position and, on the whole, to endorse the Government's program with the exception of the provision for compulsory health insurance. Hospital insurance of the three-cents-a-day type, cash indemnity insurance which is supposed to meet the heavier costs of serious illness, the expansion of workmen's compensation laws to cover occupational ills, the utilization of federal and state funds to bring medical care to the indigent —these proposals, once repudiated, are now apparently accepted in principle. Even more important is the obvious willingness of the Association to assume the lead in laying down the new health policy and an implied intention of doing what it can to keep politics out of the kind of medical care that the poor are to receive.

Gratifying as this progress may be, crucial issues are still untouched. The plight of the class that barely earns enough to pay for food, shelter and clothing and has nothing left over wherewith to pay the doctor will undoubtedly be relieved. What of the many who cannot pay even reduced physicians' fees but can set aside regularly something for medical treatment? They must turn to the public hospitals or private charity. Yet the Association advocates more efficient use of existing hospital facilities in one breath and in another illogically insists that hospitals should not provide medical care. Moreover, workmen's compensation is to be expanded to include sickness benefits, but employers and employees must have nothing to do with salaried or contract medicine.

The public is waiting for a plan which will enlist all voluntary agencies in coping with the problem of illness before taxation is invoked. Coöperatives, clinics of the Mayo and the hospital type where physicians practice in groups, contract medicine whereby physicians on a salary or higher compensation basis are enabled to minister to the sick employees of a manufacturing company can be very effective. Must experimentation in these democratic directions still struggle under legal disabilities largely of organized medicine's creation? More concessions must here be made before the country will be convinced that the need of taxation has been reduced to an inescapable minimum.—New York *Times,* September 20.

* * *

IV

Report of Reference Committee on Consideration of the National Health Program*

Adopted at Special Session, House of Delegates, American Medical Association, Chicago, September 17, 1938

Since it is evident that the physicians of this nation, as represented by the members of this House of Delegates convened in special session, favor definite and decisive action now, your committee submits the following for your approval:

1. Under Recommendation I on Expansion of Public Health Services: (1) Your committee recommends the establishment of a federal department of health with a secretary who shall be a doctor of medicine and a member of the President's cabinet. (2) The general principles outlined by the Technical Committee for the expansion of public health and maternal and child health services are approved and the American Medical Association definitely seeks to coöperate in developing efficient and economical ways and means of putting into effect this recommendation. (3) Any expenditure made for the expansion of public health and maternal and child health services should not include the treatment of disease except in so far as this cannot be successfully accomplished through the private practitioner.

2. Under Recommendation II on Expansion of Hospital Facilities: Your committee favors the expansion of general hospital facilities where need exists. The hospital situation would indicate that there is at present greater need for the use of existing hospital facilities than for additional hospitals.

Your committee heartily recommends the approval of the recommendation of the Technical Committee stressing the use of existing church and voluntary hospitals could be assured by the payment to them of the costs of the necessary hospitalization of the medically indigent.

3. Under Recommendation III on Medical Care for the Medically Needy: Your committee advocates recognition of the principle that the complete medical care of the indigent is a responsibility of the community, medical and allied professions, and that such care should be organized by local governmental units and supported by tax funds.

Since the indigent now constitute a large group in the population, your committee recognizes that the necessity for state aid for medical care may arise in poorer communities and the Federal Government may need to provide funds when the state is unable to meet these emergencies.

Reports of the Bureau of the Census, of the United States Public Health Service, and of life insurance companies, show that great progress has been made in the United States in the reduction of morbidity and mortality among all classes of people. This reflects the good quality of medical care now provided. Your committee wishes to see continued and improved the methods and practices which have brought us to this present high plane.

Your committee wishes to see established well coördinated programs in the various states in the nation, for improvement of food, housing and the other environmental conditions which have the greatest influence on the health of our citizens. Your committee wishes also to see established a definite and far-reaching public health program for the education and information of all the people in order that they may take advantage of the present medical service available in this country.

In the face of the vanishing support of philanthropy, the medical profession as a whole will welcome the appropriation of funds to provide medical care for the medically needy, provided, first, that the public welfare administrative procedures are simplified and coördinated; and, second, that the provision of medical services is arranged by responsible local public officials in coöperation with the local medical profession and its allied groups.

Your committee feels that in each state a system should be developed to meet the recommendation of the National Health Conference in conformity with its suggestion that "The rôle of the Federal Government should be principally that of giving financial and technical aid to the states in their development of sound programs through procedures largely of their own choice."

4. Under Recommendation IV on a General Program of Medical Care: Your committee approves the principle of hospital service insurance which is being widely adopted throughout the country. It is capable of great expansion along sound lines, and your committee particularly recommends it as a community project. Experience in the operation of hospital service insurance or group hospitalization plans has demonstrated that these plans should confine themselves to provision of hospital facilities and should not include any type of medical care.

Your committee recognizes that health needs and means to supply such needs vary throughout the United States. Studies indicate that health needs are not identical in different localities but that they usually depend on local conditions and, therefore, are primarily local problems. Your committee, therefore, encourages county or district medical societies, with the approval of the state medical society of which each is a component part, to develop appropriate means to meet their local requirements.

* The "Reference Committee" consisted of twenty-five delegates divided into five groups of five members. Each group studied and considered one of the five major divisions of the report of the "National Health Conference" and reported thereon. The five subchairmen then drafted the report as a whole which, as such, was then considered and acted upon by the entire House of Delegates.

In addition to insurance for hospitalization, we believe it is practicable to develop cash indemnity insurance plans to cover, in whole or in part, the costs of emergency or prolonged illness. Agencies set up to provide such insurance should comply with state statutes and regulations to insure their soundness and financial responsibility and have the approval of the county and state medical societies under which they operate.

Your committee is not willing to foster any system of compulsory health insurance. Your committee is convinced that it is a complicated, bureaucratic system, which has no place in a democratic state. It would undoubtedly set up a far-reaching tax system with great increase in the cost of government. That it would lend itself to political control and manipulation, there is no doubt.

Your committee recognizes the soundness of the principles of workmen's compensation laws and recommends the expansion of such legislation to provide for meeting the costs of illness sustained as a result of employment in industry.

Your committee repeats its conviction that voluntary indemnity insurance may assist many income groups to finance their sickness costs without subsidy. Further development of group hospitalization and establishment of insurance plans on the indemnity principle to cover the cost of illness will assist in solution of these problems.

5. Under Recommendation V on Insurance Against Loss of Wages During Sickness: In essence the recommendation deals with compensation of loss of wages during sickness. Your committee unreservedly endorses this principle, as it has distinct influence toward recovery and tends to reduce permanent disability. It is, however, in the interest of good medical care that the attending physician be relieved of the duty of certification of illness and of recovery, which function should be performed by a qualified medical employee of the disbursing agency.

6. To facilitate the accomplishment of these objectives, your committee recommends that a committee of not more than seven physicians representative of the practicing profession under the chairmanship of Dr. Irvin Abell, President of the American Medical Association, be appointed by the Speaker to confer and consult with the proper federal representatives relative to the proposed National Health Program.

C. M. A. DEPARTMENT OF PUBLIC RELATIONS†

By P. K. GILMAN, M.D.
Chairman, Special Committee of the California Medical Association

"State Humane Pound Act*

With only a comparatively few days left in which to complete the campaign against the so-called "State Humane Pound Act," which will appear as Proposition No. 2 on the November 8 ballot, the aid of every medical man and woman in California, and of all their friends and acquaintances, is necessary if this misleading antivivisection measure is to suffer well-deserved defeat.

For a period of several months the California Society for the Promotion of Medical Research, to which was entrusted the task of organizing and carrying on a campaign against the proposed "Humane Pound Act," has been engaged in educating the voters on the real menace which hides beneath the camouflage of this latest attack upon medical research.

There has been a certain amount of apathy even on the part of those most directly concerned. But little by little the Society has brought before the public the real purposes back of the "Humane Pound Act." Attention has been called to the fact that if animal experimentation is crippled by enactment of such a law, the health of every man, woman and child in California, as well as of all domestic animals themselves, will be endangered.

The time has now come when every physician, dentist, nurse, scientist, and layman and woman in the state should constitute himself and herself into individual campaigners, working actively to enlist a huge "No" vote against Proposition No. 2. With the slogan, "Kill No. 2 or it may kill you," disseminated to all those who are asked to pass judgment upon this measure, it is believed that the antivivisectionists may be defeated so overwhelmingly as to dissuade them from making any further attack upon medical research for many years to come.

Physicians and surgeons in particular are urged by the Society to:

Discuss with their patients and friends the evils that lurk in the "Humane Pound Act," with its camouflaged title.

Enlist the solid support of every member of their county medical societies and of the Woman's Auxiliaries in presenting this initiative to the voters in its true light.

Write for literature to the California Society for the Promotion of Medical Research, whose offices are at 369 Pine Street, San Francisco, and 352 Chamber of Commerce Building, Los Angeles.

Make speeches against Proposition No. 2 whenever and wherever the opportunity affords.

Work without ceasing, up to and including election day, November 8, in mustering votes *against* the measure.

Endorsements of the work of the California Society for the Promotion of Medical Research, in its campaign to defeat the "State Humane Pound Act," have been received from nearly 150 organizations—lay, scientific, and medical. More are being received almost daily. In addition to those endorsements already published† the Society announces the following:

Lafayette Club.
California Milk Producers' Association.
California Dairy Council.
California Creamery Operators' Association.
American Association of Genito-Urinary Surgeons.
American Board of Ophthalmology.
Los Angeles Tuberculosis and Health Association.
San Francisco Tuberculosis Association.
American Dental Association.
Southern California Japanese Chamber of Commerce and Industry.
California State Nurses' Association.
American Society for the Hard of Hearing.
Pacific Zone.
The American Society of Parasitologists.

369 Pine Street.

Proposed Institutions Commission for the County of Los Angeles

Foundation Laid for Future Action

During the last year a number of articles presenting comment on certain procedures in the Los Angeles County General Hospital have appeared in CALIFORNIA AND WESTERN MEDICINE.* It has long been felt by many physicians and citizens of that county that the conditions which were under criticism might probably have been avoided if the administration of the three charitable county institutions, established to care for the indigent and near-indigent sick, had been under the administration of an Institutions Com-

† The complete roster of the Committee on Public Relations is printed on page 2 of the front advertising section of each issue. Dr. George G. Reinle of Oakland is the chairman and Dr. George H. Kress is the secretary. Component county societies and California Medical Association members are invited to present their problems to the committee. All communications should be sent to the director of the department, Dr. George H. Kress, Room 2004, Four Fifty Sutter Street, San Francisco.

* For other articles in this issue on this subject, see references on page 252. Additional references in issue of September, 1938, on page 180.

† For other lists, see CALIFORNIA AND WESTERN MEDICINE: August, 1938, on page 172; September, 1938, on page 242.

* For list of references see issue of June, 1938, on pages 396 and 475.

mission, modeled after the type which has done such excellent service for the county of Alameda since the year 1917.

More than 60,000 citizens are admitted as in-patients in the Los Angeles County General Hospital during each twelve months; and more than $5,000,000 are annually allocated to it for its maintenance operations. The tuberculosis hospital and adnexa (Olive View Sanatorium) and the County Farm (Rancho Los Amigos) use several million dollars in addition.

During recent years the administration of the three institutions has been combined with outdoor and associated relief (Department of Charities), this almost ten million dollar a year combination being under the control of a county employee (Superintendent of Charities) who in turn appoints hospital superintendents, etc.

It was proposed that the institutions named be taken from the Superintendent of Charities and be managed by an Institutions Commission composed of seven citizens, each member to be appointed for a seven-year term, the term of one member terminating each year. Thus, in the course of seven years, with receiving boards of supervisors three such boards would have opportunity to study and change the personnel of the Institutions Commission. On the other hand, the staggering terms would work for a continuity of policy, as has so splendidly been exemplified by the Alameda Institutions Commission.

On September 27 (the last day on which charter amendments could be considered for placement on the November 8 state election ballot) the proposed amendments were officially called to the attention of the Board of Supervisors of Los Angeles County (a body of only five members who supervise the expenditure of $60,000,000 yearly) by two groups—one, the Los Angeles County Grand Jury, now in session, and secondly, by the Los Angeles County Medical Association through a special committee acting under instructions from the constituted authority of that organization, its Council.

The matter was somewhat complicated because about five months ago an Advisory Committee to the County Hospital, consisting of nine citizens, by resolution was appointed by the Board of Supervisors. Supervisor Gordon McDonough, who is chairman of the Board's Committee on Institutions, stated he had not been consulted in regard to its establishment and that none of its members had ever spoken to him concerning the hospital. Dr. B. O. Raulston, who was present, volunteered the information that, as regards the personnel of the Advisory Committee, he had personally experienced considerable difficulty in having individuals thereon give permission to use their names; and that it was true that the Advisory Committee had never met, but that he could assure the Board the Advisory Committee would meet after the County Grand Jury had brought in its report.

In the presentation of the proposed amendments submitted by the Los Angeles County Medical Association, Dr. George Maner, Secretary of the Association, and Dr. George H. Kress, its recent president, spoke for the Special Committee.

The value of Institutions Commissions to supervise administration of the general hospitals, the tuberculosis divisions and its county farms, as they exist in the various counties of California, has been discussed for years. The ordinances of the Alameda County Institutions Commission appeared in CALIFORNIA AND WESTERN MEDICINE, in the issue of June, 1938, on page 475.

Below are now printed the communications sent to the Board of Supervisors of Los Angeles County, as submitted by W. W. Nuzum, Chairman of the Grand Jury's Committee on Charities and Health (who visited and conferred with members of the Alameda Institutions Commission) and by the Special Committee of the Los Angeles County Medical Association, consisting of Doctors George D. Maner, John V. Barrow, and Fred B. Clarke. These communications, owing to their suggestive value, are of importance and should be of interest to all physicians who are interested in county hospital problems. For their future reference value they are given a place in this issue.

(COPY)

Letter to the Board of Supervisors from the Los Angeles County Grand Jury

Los Angeles, California,
September 27, 1938.

To the Honorable Board of Supervisors,
County of Los Angeles,
Los Angeles, California.

Gentlemen:

In the name of the Los Angeles County Grand Jury, I wish to submit a report on the Alameda County Institutions Commission which has been approved, and authorization given me to confer further with your Honorable Body relative to the proposed Charter Amendments for the establishment of an Institutions Commission in Los Angeles County.

Respectfully submitted,
W. W. NUZUM,
Chairman of Charity and Health Committee,
Los Angeles County Grand Jury.

* * *

(COPY)

Report of the Committee on Charity and Health of the Los Angeles County Grand Jury

To the Los Angeles County Grand Jury:

What is now known as the *Alameda County Plan*, originated some time in 1917, at which time the Board of Supervisors of Alameda County, by resolution, created the County Institutions Committee. From time to time the powers and the scope of the Institutions Commission have been enlarged and adjusted to meet current needs.

ALAMEDA PLAN

Briefly, the Alameda County Plan is now coördinating the Alameda County's Charity program as it relates to hospitalization and the care of indigent sick, and also exercises some degree of supervision over the volunteer agencies that have become associated with the Commission for the purpose of forming a unified program dealing with medical and preventive care of all persons living in Alameda County. It is reported that under the Alameda County Plan, indigents requiring care, whether at the home of the indigent, by way of out-patient relief, or in a hospital in the county, is supplied at the expense of the county.

As to that class of persons falling in the bracket of the so-called middle class, that is those that are able to pay some part of the expense, the organized medical profession, through the Alameda County Medical Association, has agreed to take care of such patients on a part-pay basis, usually less than normal fees. It is reported that this part-pay program has been operating for several years, and was organized by mutual agreement between the Alameda County Medical Association and the Alameda County Institutions Commission. Such so-called middle-class patients who are unable to pay full fees but who are not eligible for county care because of failure to meet the legal requirements as indigents, are referred to members of the County Medical Association in rotation for such care as such patients may require.

The Alameda County Institutions Commission, in the administration of its various functions, provides free medical care for persons who meet the following requirements:

1. Legal residence of Alameda County and State of California.
2. Who require care in clinics, hospitals, sanitariums or preventoriums.
3. Who are unable to pay for such care at minimum rates without depriving themselves or their families of the basic necessities of life.
4. Whose responsible relatives are likewise unable to provide such care.

In the main, the Alameda County Institutions Commission renders free care only to persons who meet the statutory requirements as laid down by state law and county ordinance, which requirements are in all essentials similar to those of Los Angeles County.

The Institutions Commission of Alameda County functions through a medical director and administers:

1. The Highland Hospital for acute general patients, its emergency department together with its psychopathic ward.
2. The Fairmont Hospital for chronic patients, including tuberculosis patients of all types, and indigent patients.

3. The Arroya Sanatorium for tuberculosis patients.

4. The Del Valle Preventorium.

5. Clinics at Berkeley, Oakland, Alameda, San Leandro, and Hayward.

The Medical Social Service, such as is administered in Los Angeles County by the Superintendent of Charities, covering both in-patients and out-patients, is administered in Alameda County directly under the Institutions Commission, through its medical director. Originally there was a separation of functions between the medical part of the organization and the general executive part of the organization in Alameda County, but now those two functions are consolidated and both are administered by one man—the Medical Director—who is superintendent as well.

PRESENT LOS ANGELES COUNTY ORGANIZATION

The situation in Los Angeles County is, briefly, as follows:

The General Hospital is administered by two persons—one a medical man responsible for the professional standards, and the other a business man responsible for the business part of the institution. The Olive View Sanatorium is similarly administered, and the Rancho Los Amigos also has its own separate heads. While all of the institutions are nominally under one central head—the Superintendent of Charities—each one must of necessity steer its own course. It is manifestly impossible for one person acting as Superintendent of Charities to be in close contact with the intimate details of each of the institutions in Los Angeles County, especially when it is realized that our General Hospital alone is probably larger and spends more money than do all of the Alameda County Institutions combined.

PROPOSED CHARTER AMENDMENTS

The Los Angeles County Medical Association, acting through one of its special committees, is now proposing an amendment to the charter of Los Angeles County, by the terms of which amendment the Los Angeles County General Hospital, the Olive View Sanatorium, the Rancho Los Amigos, and the County Cemetery, would be under the exclusive charge of an Institutions Commission. The proposed amendment also provides that the Institutions Commission would have the power to appoint the superintendents and all other personnel and would have complete charge of the institutions, subject only to the general laws of the state in so far as the same provide for the approval of the County Board of Supervisors. If such an amendment is adopted and incorporated in the laws of the county, the Board of Supervisors would appoint an Institutions Commission who would in turn take over the complete responsibility for running the institutions above mentioned. The Superintendent of Charities, of course, would continue to administer, as heretofore, all matters of social service and general charity work except in so far as the same may relate to cases under the jurisdiction of the Institutions Commission.

ADVANTAGES OF AN INSTITUTIONS COMMISSION

It is pointed out that the Institutions Commission would be an independent nonpolitical organization entirely divorced from the Board of Supervisors and subject to no political domination. If appointments to such commission are made from among the citizens of this county who are public-spirited and qualified by experience and training to serve on such commission, unquestionably a great deal of good can be accomplished. The Institutions Commission at Alameda County is made up of business men, physicians, university professors, a dentist, and a police judge; and while I have had no opportunity to inquire into the detailed affairs of the Alameda County institutions, I am under the impression that the Commission has functioned efficiently throughout the years of its existence. Whether or not a similar commission in Los Angeles County will meet with the same degree of success depends, of course, upon the caliber of persons appointed to such commission and the integrity of the personnel through whom such commission will administer its affairs.

Respectfully submitted,

W. W. NUZUM,
Chairman of Charity and Health Committee, Los Angeles County Grand Jury.

(COPY)

Letter to the Board of Supervisors from the Special Committee of the Los Angeles County Medical Association

LOS ANGELES COUNTY MEDICAL ASSOCIATION
Los Angeles, September 26, 1938.

Honorable Board of Supervisors,
Fifth Floor, Hall of Records,
Los Angeles, California.

Gentlemen:

Attached hereto find certain proposed amendments to the Charter of the County of Los Angeles. These amendments are submitted by a special committee appointed to act for the Los Angeles County Medical Association. They have for their purpose a new administrative policy for the Los Angeles County General Hospital, Olive View Sanatorium, Rancho Los Amigos (County Poor Farm), and the County Cemetery.

The proposed amendments are the result of long and continuous study concerning the above-named institutions and the possible best method of administration of them. The plan proposed contemplates no experiment, because Alameda County in 1917 established such an institutions commission, and its citizens have given their loyal and almost unanimous support thereto. It is our belief that your Honorable Board may well submit these proposed amendments to the electorate of Los Angeles County on November 8.

We call your attention to the fact that these amendments simply provide that hereafter the administration of the four institutions above named, for which, collectively, an annual expense for maintenance and operation of between five and ten million dollars is allotted by your Board, would, if the Los Angeles County electorate approve, be under the supervision of an Institutions Commission composed of seven citizens whose wide experience in business and other administrative activities would give a guarantee of wise expenditure of public funds.

Your Honorable Board will note that the proposed amendments do not do away with the Department of Charities, or the Superintendent of Charities. The Superintendent of Charities would continue to carry on the very important function of public relief and allied activities subject to the instructions of your honorable body.

In other words, we are asking the Honorable Board of Supervisors to place the charitable institutions dealing with the sick under a group of seven citizens, whom the Board of Supervisors will appoint, instead of allocating this work, in addition to a multitude of other duties, to a single individual, namely, the Superintendent of Charities.

The attached amendments have been carefully drawn by competent legal counsel and, we believe, are so simply and carefully phrased that the County Counsel will need no prolonged deliberation thereon to give his opinion on their nature, scope, or applicability to the purposes in mind.

We, therefore, respectfully request the Honorable Board of Supervisors at its meeting on September 27, since that is the last day upon which a Charter amendment may be adopted for placement on the November 8 ballot, to so order.

Respectfully submitted by the Special Committee on Charter Amendments.

GEORGE D. MANER, M.D., *Chairman*
JOHN V. BARROW, M.D.
FRED B. CLARKE, M.D.

* * *

(COPY)

Proposed Amendments to Article IV, Section 14, and Article VI, Section 22, of the County of Los Angeles Charter

Dealing with (*a*) the county's charitable institutions: Los Angeles County General Hospital; Olive View Sanatorium; Rancho Los Amigos; County Cemetery; and (*b*) with the Department of Charities.

Article IV, Section 14, of the Charter of the County of Los Angeles is hereby amended by inserting immediately after the words "Horticultural Commissioner" the words, "Institutions Commission, members of," and by inserting after the words, "The Treasurer shall be ex officio tax collector and license collector," a new paragraph reading as follows:

1. There is hereby created a County Institutions Commission, consisting of seven members to be appointed by the Board of Supervisors. They shall hold office for the term of seven years, provided that, of these first appointed, one shall hold office for one year, one for two years, one for three years, one for four years, one for five years, one for six years, and one for seven years, from the effective date of this section. These first appointed shall classify themselves by lots as to terms of office. Whenever a vacancy occurs in the Commission, it shall be filled by the Board of Supervisors, and if for an uncompleted term, said appointment shall be made for the uncompleted balance of the term. Each member shall have been a resident of the County of Los Angeles for at least five (5) years immediately preceding his appointment. Members of the Institutions Commission shall be persons who have had wide experience in business administration, public welfare work, or in medical practice. Members shall receive Twenty-five ($25.00) Dollars for each meeting attended, provided that such compensation shall not be payable for more than three meetings in any calendar month.

Article VI, Section 22, of the Charter of the County of Los Angeles is hereby amended by striking out the present Section 22, reading as follows: "The Superintendent of Charities shall be under the direction of the Board of Supervisors, and shall exercise a general supervision over, and enforce rules and regulations for the conduct and government of, the charitable institutions of the county. He shall perform such other duties as may be prescribed by the Board of Supervisors or by law."
and by inserting in lieu thereof the following:

Sec. 22. (1) The Superintendent of Charities shall be under the direction of the Board of Supervisors, and shall exercise a general supervision over, and enforce rules and regulations for the conduct and government of, the Department of Charities. He shall perform such other duties as may be prescribed by the Board of Supervisors or by law.

(2) The Institutions Commission shall have the following exclusive powers and duties.

It shall have complete management and control and may make and enforce rules and regulations for the conduct and government of the charitable institutions of the county. It shall direct, supervise and control all activities of the General Hospital, Rancho Los Amigos, Olive View Sanatorium, and County Cemetery. It shall, when necessary, appoint an executive superintendent of the General Hospital, a superintendent of Rancho Los Amigos, a superintendent of Olive View Sanatorium, a superintendent of the County Cemetery, and other employees, and said appointees shall at all times be subject to its supervision and direction, and shall perform such other duties as may be prescribed by the Board of Supervisors or by law.

* * *

Press items in which comment is made on the proceedings before the Los Angeles Board of Supervisors, at its meetings of September 27, shed additional light on the subject:

Ask New County Charities Setup, Board of Seven

A special committee of the County Medical Association today proposed to the Board of Supervisors a sweeping change in the handling of Los Angeles County charitable institutions which would relegate the function of the Department of Charity to that of merely handling other relief phases.

Dr. George H. Kress, member of the Medical Association's Special Committee on Proposed Institutions Commission Charter Revision, proposed a charter amendment that would place the handling of the General Hospital, Olive View Sanatorium, Rancho Los Amigos, and the County Cemetery in the hands of a seven-man commission to be appointed by the Board of Supervisors. The commission would have full responsibility for the management of those institutions which are now under the Charity Department.

Would Appoint Seven

The new body would be called the Institutions Commission and be composed of seven appointees, holding office for seven years.

The proposal further stated that the members of this commission shall "be persons who have had wide experience in business administration, public welfare work or in medical practice," and that the members "shall receive $25 for each meeting attended, provided that such compensation shall not be payable for more than three meetings in any calendar month."

Doctor Kress, in making this proposal to the Board, stated that Alameda County has had a similar commission since 1917 and that it has worked there "in a beneficent manner."

Favors Trial of Plan

Supervisor Gordon L. McDonough, Chairman of the Institutions Commission of the Board of Supervisors, stated that he felt the proposal would have decided advantages, but that rather than adopting a charter amendment at this time he would favor the adoption of an ordinance to be used for a trial period.

Chairman Roger W. Jessup then strongly opposed a motion for the ordinance.

The motion for McDonough's trial ordinance failed, and McDonough then moved that the Board of Supervisors set up a committee to study the proposal.

The motion to set up a committee also failed of adoption and a motion from Supervisor Herbert C. Legg to place the matter on the table was adopted, with Supervisor McDonough's the only negative vote.

Dr. B. O. Raulston, member of the General Hospital Advisory Committee, which was appointed five months ago to advise on the General Hospital operation, spoke briefly at the request of Supervisor Ray Jessup.—Los Angeles *Herald-Express*, September 27.

* * *

Medical Group Seeks New Health Set-up

Commission to Control All of County's Institutions Sought

Transfer of control over the General Hospital and all other county health institutions from Charity Superintendent Rex Thomson to a proposed new institutions commission of seven members was urged upon the Board of Supervisors today by the Los Angeles County Medical Association.

The committee, in a letter to the supervisors, asked that an amendment to the county charter to bring about such changes be placed on the November 8 ballot. The committee membership is composed of Drs. George Maner, John V. Barrow and Fred B. Clarke.

Suggest Seven-Man Board

Suggestions of this committee were that the charter amendment create an institutions commission of seven members of wide experience in business administration, public welfare and medical practices. Members would be paid $25 per meeting for not more than three meetings per month and terms of office would extend for three years.

The charter amendment group would give this commission complete control over all county institutions with power to name executive superintendents to operate them.

Thomson Would Lose Control

Another amendment to the charter sought by the committee would change the charter amendment which gives the superintendent of charities supervision over county institutions.

This would strip Charity Superintendent Thomson of his present control over the General Hospital, the County Farm and the Olive View Sanatorium.

The supervisors will consider the request tomorrow.—Hollywood *Citizen-News*, September 26, 1938.

COMPONENT COUNTY MEDICAL SOCIETIES

SAN JOAQUIN COUNTY

The regular meeting of the San Joaquin County Medical Society was held in Stockton on September 1. The regular meeting was preceded by the customary supper meeting at the Hotel Wolf. It was decided that the supper meetings would convene at 6:30 p. m. instead of 7 p. m., so as to give the local speaker more time. There was no prepared paper for this meeting on account of dove season opening on this date.

The regular meeting was called to order by the secretary, Dr. G. H. Rohrbacher, in the absence of the president and the two vice-presidents. The Chair appointed Dr. C. A. Broaddus to act as president *pro tem*.

The application of Dr. Dora Ames Lee having been reported on favorably by the Membership Committee, and there being no objections from the floor, was declared a member. The applications for membership of Dr. Phillip V. Lamb of Angels Camp, Doctor Edward C. Faulkner and Dr. F. S. Dietrich of Stockton, were read and referred to the Membership Committee. Dr. Dewey Powell delivered a eulogy on the passing of Dr. James Porterfield Hull.

Dr. C. A. Broaddus and the Committee on Postgraduate Activity reported on the Postgraduate Committee's plans for the fall postgraduate session, and also reported on the progress of the formation of the "Medical Academy of Graduate Study" in Stockton. The secretary relinquished his post temporarily and moved that, because of the many changes in the by-laws and constitution of the local medical society, a committee be appointed to draw up and submit to theSociety a new set of by-laws and constitution to conform as much as possible with that of the California Medical Association's. This motion was seconded from the floor and passed.

The meeting was then turned over to Dr. Henry Rixford, who before introducing the speakers of the evening, informed the Society of the action taken by the San Joaquin County Kennel Club in organizing opposition to the "Humane Pound Act," and the secretary was requested to write each of the component county societies informing them of the action taken and suggesting that they contact the various kennel clubs in their jurisdiction, and make an effort to have these kennel clubs go on record actively against the passage of the "Humane Pound Act."

Doctor Rixford introduced the speakers of the evening. Leonard Dobson, Associate Professor of Surgery at Stanford University, spoke on the *Present Status of Injection Therapy of Hernia,* and Nelson Howard, Associate Professor of Surgery at Stanford University, spoke on *Fractures of the Shoulder Girdle and Upper Arms.* Both papers were well illustrated by slides and occasioned much interest.

The meeting was adjourned at 11:30 p. m. and refreshments were served. G. H. ROHRBACHER, *Secretary.*

✻

SAN MATEO COUNTY

The meeting of the Board of Directors of the San Mateo County Medical Society was held Wednesday, August 31, at 9 a. m. in the library at Mills Memorial Hospital.

The secretary announced that the Board of Supervisors of San Mateo County had appropriated a fund amounting to $5,000 to be used in establishing clinics throughout the county to make clinical facilities available to the indigent sick at points less removed from their homes than the present Community Hospital Out-Patient Clinic, and at the same time to lift some of the load from the department at the Community Hospital. Tentative arrangements involved the payment to physicians attending the clinic, at a rate of $5 per hour. Four clinics to be established: one in Redwood City, one in Burlingame, one in Colma, and one in Half Moon Bay. Clinics to be open from four to six hours per week, a nurse and a Social Service worker to be in attendance at each clinic during its operation. The secretary mentioned the fact that Doctor Gans had requested the coöperation of the County Medical Society in establishing the clinics.

Following the presentation of this matter there was considerable discussion, centering to some extent about the fact that $5 per hour did not constitute adequate pay for the physician's time. After considerable debate the Board voted to coöperate with the County Department of Public Health in the establishment of these clinics. There was one dissenting vote. Doctor Gans and Mr. Packwood arrived at the end of the meeting and when informed of the action of the Board assured the Board members present that the County Department would assist the physicians, especially in the matter of the Social Service work, and would leave the professional end of the operation of the clinics entirely to the San Mateo County Medical Society. The Board requested the secretary to ask for volunteers from the members of the San Mateo County Medical Society and to prepare a panel whereby volunteers will be rotated in their service at each division clinic.

A letter from Doctor Tormey, Director of the Adult Center at the San Mateo Junior College, concerning the establishment of a course in domestic relations to be handled by a professional man, preferably a local one, was read. The Board suggested the name of Dr. Erma Macomber to teach the women, and Doctors Holmes, Whitney, Benner, and Mawdsley to teach the men.

The secretary read two letters, one from a group representing the University Women's Club and one from Doctor Buckham, Secretary of the Burlingame and San Mateo Ministerial Association, requesting the Medical Society to support with their interest a survey into the public health situation in San Mateo County to be conducted by the United States Department of Public Health. The Board unanimously voted its approval of such a survey and directed the secretary to communicate with the Board of Supervisors of San Mateo County to this effect.

J. GARWOOD BRIDGMAN, *Secretary.*

CHANGES IN MEMBERSHIP

New Members (20)

Alameda County

Max Eichwald
E. E. Hessing
Reinchard Lewin
George Frank Mainwaring
Henry S. Patton
Paul C. Rahn
A. Bradley Rankin
Clarence Splithoff
Jacob J. Yee

Kern County

Newell J. Brown, Jr.
John J. McCarthy

Lassen-Plumas-Modoc County

James Willis Crever

San Diego County

Martin F. Bancroft
Albert R. Egan
Arthur J. Present

San Joaquin County

Dora Ames Lee

Santa Cruz County

Gail L. Fleming

Sonoma County

Thomas E. Albers
Harold E. Lohlein
Pauline Longnecker

Transferred (1)

Parker Hollingsworth, from San Diego County to Alameda County.

Resigned (1)

Thomas J. Rankin, from San Diego County.

In Memoriam

Clark, Edward Perry. Died at Los Angeles, September 5, 1938, age 65. Graduate of Hahnemann Medical College and Hospital of Philadelphia, 1897. Licensed in California in 1919. Doctor Clark was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

✝

Galbraith, George Herbert. Died at Long Beach, September 11, 1938, age 63. Graduate of St. Louis University School of Medicine, 1904. Licensed in California in 1906. Doctor Galbraith was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

✝

Hovde, Anders G. Died at Los Angeles, August 14, 1938, age 63. Graduate of the University of Minnesota Medical School, Minneapolis, 1903. Licensed in California in 1917. Doctor Hovde was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

Orr, Jane. Died at Oakland, August 19, 1938, age 66. Graduate of Tufts College Medical School, Boston, 1901. Licensed in California in 1904. Doctor Orr was a member of the Alameda County Medical Association, the California Medical Association, and the American Medical Association.

✠

OBITUARIES



Theodore E. Schwarz
1877–1938

Dr. Theodore E. Schwarz was born on August 9, 1877, in Cincinnati, Ohio. His college preparatory work was taken at the Ohio Military Institute and he was graduated in medicine from the Ohio-Miami Medical College, now the medical department of the University of Cincinnati, in 1900. His interneship was served at the German Deaconess Hospital in Cincinnati, following which he entered into the practice of medicine which he followed in various places for the next eighteen years. At the beginning of the World War he was commissioned an officer in the Medical Corps and was placed in charge of a field hospital and attached to the first division. He served in France, with duties in the front lines for many months, received an injury from a shell explosion which crushed his right shoulder and incapacitated him for further practice in his chosen profession. After his return to this country he was employed by the United States Public Health Service and assigned to the hospital at Palo Alto, California, where he served for two years. He then took a year's postgraduate work at the University of California, and for two years was in the tuberculosis hospital at Denver, Colorado, where he was assistant superintendent, serving at the same time as a staff physician. He was appointed as District Medical Officer and assigned to the United States Veterans' Bureau Hospital at Phoenix, Arizona, and served the Bureau, also, at Birmingham, Alabama, and as assistant to the Clinical Director at the United States Veterans' Hospital at Aspinwall, Pennsylvania. In 1928 he received appointment as assistant superintendent of Alameda County Hospital in Oakland, California, and entered upon his duties in that institution on July 15. He served continuously in that capacity until August 4, 1938, the day of his death.

The end came suddenly, he having been in good health, carrying on his duties up to within two hours of the time of his passing. Doctor Schwarz was well trained in administration, and devoted the last years of his life primarily to the duties of a medical administrator. As a hobby, he became interested in clinical photography, and his scientific pictures, particularly those of cancer, are known to medical men throughout the nation. He has received favorable notice in numerous scientific publications and in connection with this contribution has received the praise of experts in the field.

He was devoted to the care of the sick; he was kind and sympathetic in his treatment of those with whom he came in contact, and a source of strength as he gave sympathetic interpretation to the relatives and friends of patients confined in the county hospital where he presided.

He was well known as a lecturer and writer; he spoke frequently before scientific bodies and service clubs. He had been prominent in Masonic circles and was past master of the Clay Center Kansas Lodge, F. and A. M. He was a member of the Alameda County Medical Association, the California State Medical Association, and the American Medical Association. He retained membership in many civic and fraternal organizations.

There remains to mourn his loss, his wife, Mrs. Edna G. Schwarz, and four children—Theodore J., Frank I., Dorothy A., and Edward C. His fine character and outstanding ability in his chosen profession made for him a wide circle of friends, particularly among the poor and needy, who will miss his kind words, his sympathetic interest and his prompt attention to the medical problems which they presented. By his death he will be missed by his numerous friends in the medical profession, as well as many associates who have known him for the splendid physician that he was and the fine service that he rendered.

* * *

WHEREAS, God in his infinite wisdom has seen fit to remove from our midst our friend, colleague and personal associate, Dr. Theodore E. Schwarz, who, by virtue of his position in public service in this county, has made the acquaintance of so many of us and retained the friendship of all; and

WHEREAS, His passing is a source of deep regret to all of his friends and acquaintances; and the splendid work which he carried on in the promotion of public medical service, the development of a technique in the illustration of important cases and the sympathetic understanding which he gave to all of his professional and administrative problems has endeared himself to all with whom he came in contact; therefore, be it

Resolved, That the Alameda County Medical Association, in regular meeting assembled on this nineteenth day of September, do hereby express these sentiments and pay our tribute to this departed member. That a copy of this resolution be spread upon the minutes of the Association and that a copy be sent to his devoted wife, as a token of our sympathy and appreciation.

(Signed): B. W. BLACK, M.D.
I. O. CHURCH, M.D.

✠

James Porterfield Hull
1872–1938

On July 22, 1938, Dr. James Porterfield Hull passed on to his final reward. Stricken with a heart attack while on a vacation at Lake Tahoe three weeks before, it was well known that Jim Hull had been critically ill. However, reports had been received of his improvement, and it was with a sense of shock as well as personal loss that the members of the San Joaquin County Medical Society received the news of his death.

Doctor Hull was born in Pennsylvania on the twentieth day of March, 1872, and received his education in the public school of San Joaquin County and in the San Joaquin Valley College at Woodbridge prior to his graduation from the California Medical School in 1895. He practiced in Lodi from 1896 to 1905 and then, after a year of postgraduate work at the New York Polyclinic, he practiced in Stockton from 1906 to 1912. He then went to Bakersfield, where he practiced from 1912 to 1920. During most of the time he was superintendent and surgeon-in-chief to the Kern County Hospital. He practiced in Stockton from 1920 until the time of his death.,

Besides engaging in general practice he was surgeon for the Holt Caterpillar Company before their removal from the city, and also surgeon for the Southern and Western Pacific Railroads as well as examiner for most of the leading insurance companies.

Jim Hull had a long and active period of service in the practice of medicine. In spite of his forty-three years of work, he was very keenly interested in the progress of medicine. He was active in the postgraduate study committee for the past several years in this Society, and was one of the regular attendants at the county meetings and at the Saint Joseph staff meetings. Over the latter organization he had recently served as president, and in years

past has served this county unit both as president and as secretary.

As recently as last March, on the occasion of his sixty-sixth birthday, he held open house in the Medico-Dental clubrooms, to which he invited all the tenants of this building and their nurses and office secretaries. I well remember that he remarked to me on that day that he felt that they were all his friends and that he certainly wanted them to all be his friends, so he had included the entire building and its personnel in his birthday party.

Indeed the Medico-Dental clubrooms had been his pride. As chairman of the committee which selected its equipment and furnishings, he gave it more time and study than he would had it been his own home. As a member of that committee I know full well that the time and the care and infinite attention to detail that he gave to the carrying out of the duties as chairman of the House Committee. So it was indeed fitting that in these rooms that meant so much to him that the entire building shared in the festivities of his last birthday party.

Yes, Jim Hull is gone, but to those who knew him through the years, and to the great number of patients who benefited by his counsel and skill, his memories linger on. To the younger men of the profession, forty-three years of service will offer a splendid example in establishing their own record in the profession.

DEWEY POWELL.

THE WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION †

MRS. CLIFFORD A. WRIGHT.....President
MRS. FRED H. ZUMWALT.....Chairman on Publicity
MRS. FRANK H. RODIN....Assistant Chairman on Publicity

News Letter

We have had a very healthy year for membership and hope that the increase will continue from year to year, for in numbers there is strength.

The task before us now is health education. It is very important that every member be well informed. To study individually and in groups will help our members to be prepared when they can be of assistance to the medical profession and to the community in which they live.

A very fine library has been established by the Woman's Auxiliary to the California Medical Association. There are also a number of interesting plays which are very suitable for children to present on school programs. They are educational and entertaining, and will be welcomed by the teachers in your community.

These books and plays are available for your use and will be sent to you if you will communicate with the librarian, Mrs. Arthur T. Newcomb, 1 Richland Place, Pasadena. The following is a list of books in the library:

BOOKS

The Lame, the Halt and the Blind, Howard W. Haggard, M.D.
Devils, Drugs and Doctors, Howard W. Haggard, M.D.
Fads and Quackery in Healing, Morris Fishbein, M.D.
One Hundred Thousand Guinea Pigs, Arthur Kallet and F. J. Schlink.
The Life of Pasteur, Rene Vallery-Radot.
The Story of Medicine, Victor Robinson, M.D.
Behind the Doctor: The Romance of Medicine, Logan Clendening.
The American Doctor's Odyssey, Victor Heiser, M.D.
Guiding Your Life, Josephine Jackson, M.D.
Outwitting Our Nerves, Josephine Jackson, M.D.
Applied Eugenics, Paul Popenoe.
Conservation of the Family, Paul Popenoe.
Sterilization for Human Betterment, Popenoe and Gosney.
Eugenics, Genetics and the Family, Vol. I, Eugenics in Race and State, Vol. II, Papers of the Second International Congress of Eugenics.
American Medicine, Sigerist.
Biological Basis of Human Nature, H. S. Jennings.
The Nervous Child, H. C. Cameron.
What About Alcohol, E. Bogen and L. Hisey.
Nutrition and Physical Fitness, L. J. Bogert.
Home Care of the Sick, N. Selbert.
Personal Hygiene Applied, Jesse F. Williams.
Your Carriage, Madam, Lane.
Modern Motherhood, C. E. Heaton.
Adolescense; Studies in Mental Hygiene, Frankwood Williams.
Birth Control, Its Use and Misuse, Dorothy D. Bromley.
Help Yourself to Beauty, Cocks.
Hygiene of Community, School and Home, E. W. Steel and E. G. White.
Tobacco, W. L. Mendelhall.
Curative Value of Light, E. M. Mayer.
Your Heart and How to Take Care of It, R. H. Babcock.
The Wholesome Personality, William Burnham.
The Phychology of Sex, Havelock Ellis.
Cancer: What Everyone Should Know, J. A. Tobey.
The Human Body, Logan Clendening.
Sex Hygiene; What to Teach and How to Teach It, A. Worcester and H. K. Oliver.
Why Be Tired? Joselyn.
Nostroms and Quackery, American Medical Association.
Getting Well and Staying Well, John Potts.
The Samaritans of Molokai, C. J. Dutton.
Why Die Before Your Time? H. S. Williams.
Mental Hygiene in the Community, Clara Bassett.
Normal Diet and Healthful Living, Sansum.
American Men of Science, Cattell and Cattell.
Paying Through the Teeth, Bissell Palmer.
Facts and Frauds in Women's Hygiene, Greenberg.
Methods and Materials of Health Education, J. F. Williams and F. Shaw.
Community Hygiene, L. Chenoweth and W. Morrison.
Man the Unknown, Alexis Carrell.
History of Medicine, Fielding H. Garrison, M.D.
Disease and Destiny, Major.
Short History of Medicine, Singer.
Rats, Lice and History, Zinsser.
Health of the Runabout Child, Lucas.
Great Doctors, Segerist.
Minute Men of Life, Lambert and Goodwin.

PLAYS

Good Health Elves.—Particular attention is paid to the health rules frequently broken by children. Seventeen to twenty-five characters suitable for fifth and sixth grades; production time about thirty minutes.

The Trial of Jimmy Germ.—Jimmy Germ is banished from the kingdom of Health by Sunshine, Fresh Air, Soap, etc. Eight characters, suitable for fifth and sixth grades; production time five minutes.

The Friendly Brushes.—Scrubbing brush, tooth brush, nail brush, and all other brushes wear themselves out keeping things clean along Healthway. Eleven characters, suitable for fourth and fifth grades; production time ten minutes.

The Magic Fluid.—(Diphtheria Antitoxin) with chorus, "King's Subjects." Science brings magic fluid (serum) to service of Kingdom of Youth, etc. Eight characters, suitable for sixth and seventh grades; production time fifteen minutes.

On Board the S. S. Health.—Six little headaches and five colds are not wanted on board S. S. Health, but five nursery rhymes with their health stories are welcome passengers. Twenty characters, suitable for fourth and fifth grades; production time ten minutes.

The Gift a King Accepts.—King of Land of Gluttony accepts gift of health and learns about cleanliness, food, exercise, sleep. Fifteen characters, suitable for seventh and eighth grades; production time fifteen minutes.

The School Lunch Room.—Undernourished boy learns about milk, vegetables, etc. Eleven to twenty characters, suitable for fifth and sixth grades; production time fifteen minutes.

The Medicine Men.—A puppet play. Gin Lee, little Chinese boy, and David Scott, an American, both have diabetes—Chinese and modern medicine. Seven characters, suitable junior high school students; production time ten minutes.

"Sissy."—Proper health habits made a regular boy out of a "Sissy." Four characters, suitable junior high school or high school; production time fifteen minutes.

King Smog.—One-act play on the smoke evil. Thirteen characters, suitable junior high school students; production time ten minutes.

† As county auxiliaries of the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Frank H. Rodin, Assistant Chairman of the Publicity and Publications Committee, 2457 Bay Street, San Francisco. Brief reports of county auxiliary meetings will be welcomed by Mrs. Rodin, and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the Editor to allocate two pages in every issue to Woman's Auxiliary notes.

Note.—The *Courier* went to press on October 15, and will be in the hands of the members by November 1.

Any member who does not receive her copy of the *Courier* or the *National News Letter* kindly inform Mrs. Fred H. Zumwalt, 3880 Clay Street, San Francisco.

MRS. FRANK H. RODIN.

Official Notices

State Board Meeting

The fall meeting of the Board of Directors of the Woman's Auxiliary to the California Medical Association was held at the Casa Del Mar Beach Club in Santa Monica, on September 7, at 10 a. m. The president, Mrs. Clifford Andrews Wright, presided.

Those present were:

Officers—Mesdames Clifford Andrews Wright, A. E. Anderson, George Calvin, G. Wendell Olson, and E. Eric Larson.

Councilors-at-Large — Mesdames T. A. Card, R. S. Kneeshaw, and Fred H. Zumwalt.

District Councilors — Mesdames F. G. Lindemulder, Horace H. McCoy, Edward Markthaler, J. R. Walker, Lawrence M. Knox, Harold Trimble, and James F. Percy.

County Presidents—Mesdames Frank Baxter, Oakland; Hiram Currey, Orange; W. W. Roblee, Riverside; C. O. Tanner, San Diego; and H. E. Henderson, Santa Barbara.

At noon the Board members were the guests of the Woman's Auxiliary to the Los Angeles County Medical Association at the Casa Del Mar Beach Club. The county's president, Mrs. William H. Leake, presided, and graciously presented Mrs. Clifford Andrews Wright, who then introduced her Board members. Mesdames Paul Dougherty and Cullen W. Irish were responsible for the arrangements and the artistic floral decorations of giant multicolored dahlias.

Component County Auxiliaries

Alameda County

The opening meeting of the Woman's Auxiliary to the Alameda County Medical Association was held on Friday, September 16 at the Clairmont Country Club. Mrs. Frank Baxter, President, presided. About one hundred members and guests met for luncheon.

Mrs. Clifford A. Wright, State President, was the guest of honor while on a visit to counties in the North.

The program chairman, Mrs. I. O. Church, presented Mr. Ben H. Read, Executive Secretary of the Public Health League of California, who spoke on *Legislative Measures Affecting Medicine.*

Mesdames Clarence Page and A. A. Alexander, as hostesses, greeted all the new and old members and guests. Mrs. R. A. Crum was responsible for the reservations.

MRS. GRANT H. ELLIS, *Publicity Chairman.*

❋

Los Angeles County

The first general meeting of the Los Angeles County Auxiliary was held on September 27 at the County Medical Building. The president, Mrs. Leake, was in the chair.

After luncheon, the guest speaker, Dr. B. O. Raulston, Professor of Medicine, University of Southern California, pointed out the serious consequences in the passage of the *Humane Pound Act.* Representatives of the press and members of the Tail Waggers' Association were invited guests.

Matters discussed at the business meeting were the County Medical Indigent Fund for the poor and needy and classes for public speaking.

MRS. KARL O. VON HAGEN, *Publicity Chairman.*

❋

San Francisco County

The first general meeting of the Woman's Auxiliary to the San Francisco County Medical Society was held on Tuesday, September 20, at 1:30 p. m. in the County Medical Society Building. The president, Mrs. Thomas E. Gibson, presided.

The chairmen of arrangements of the convention of the Woman's Auxiliary to the American Medical Association, held last June, were the honored guests of the San Francisco County Auxiliary, in appreciation of the splendid services rendered.

After a short business meeting, Dr. M. L. Tainter spoke on the *Humane Pound Act.* Representatives of lay organizations were invited to hear Doctor Tainter on this very vital subject so that they may be informed and report to their organizations the importance of permitting the medical profession to continue scientific medical research.

After the meeting the members and guests were invited to tea, which was graciously presided over by Mesdames A. L. Brown and Fred D. Fellows and their committee, who were the hostesses of the day.

MRS. CLAIN F. GELSTON, *Publicity Chairman.*

❋

Santa Barbara County

The June meeting of the Santa Barbara County Auxiliary was held at the home of Mrs. Harold Schwalenberg. Twenty members were present.

Brief informal reports of the State Convention were given by Mesdames John Paying, E. J. Markthaler, C. W. Henderson, H. Verrill Findlay, and H. E. Henderson.

The Santa Barbara County Auxiliary joined a number of other women's organizations and the County Council of Social Agencies to support a lecture on *Sex Education* given by Dr. Benjamin Greenberg on June 3.

Through the contribution of fifty cents by each member, two needy Girl Scouts were sent to camp for two weeks each.

At the close of the meeting the following officers were installed: Mrs. H. E. Henderson, president; Mrs. A. T. Wilcox, first vice-president; Mrs. O. C. Jones, second vice-president; Mrs. C. W. Henderson, recording secretary; Mrs. H. V. Findlay, treasurer; Mrs. P. A. Grey, corresponding secretary.

❋ ❋ ❋

On September 13, Mesdames H. E. Henderson and Edward Markthaler were guests at a dinner meeting held by members and their wives of the Ventura County Medical Society at Saticoy. The members of the Santa Barbara County Auxiliary were invited by the doctors' wives of Ventura County to discuss the purposes and duties of an Auxiliary.

MRS. H. E. HENDERSON, *President.*

❋

Tulare County

On Wednesday, September 14, the Woman's Auxiliary to the Tulare County Medical Society met at the home of Mrs. J. C. McClure in Lindsay.

At the close of the business meeting our State President, Mrs. Clifford A. Wright, addressed the members.

Other guests of the State Board were: Mrs. E. Erick Larson of Los Angeles, and Mesdames A. E. Anderson and J. R. Walker of Fresno.

MRS. W. B. PARKINSON, *Corresponding Secretary.*

"May I suggest, with respect to health education, that until we can establish some of our teaching on a more sound scientific foundation, we give a little less emphasis to personal hygiene habits—especially in our schools, teach the individual the importance of personal immunization, early medical care and diagnosis in illness, and impress upon him the value of community-wide environmental sanitation measures. We also need another kind of health education—what I call 'political' education—acquainting the public with what the health department can do, what its objectives are and what its achievements have been. This aspect of our health education program has been sadly neglected in many sections of the country in the past. There is urgent need for teaching these things—interpreting health needs and the health program to the 'man on the street,' and the woman in the home."—Dr. C. E. Waller, U. S. P. H. S.

MISCELLANY

Under this department are ordinarily grouped: News Items; Letters; Special Articles; Twenty-five Years Ago column; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings

American Medical Association, St. Louis, Missouri, May 15 to 19, 1939. Olin West, M.D., Secretary, 535 North Dearborn Street, Chicago, Illinois.

California Medical Association, Hotel Del Monte, May 1 to 4, 1939. George H. Kress, M.D., Secretary, 450 Sutter Street, San Francisco.

* * *

American College of Surgeons, New York, October 17 to 21, 1938. George W. Crile, M.D., 40 East Erie Street, Chicago, Chairman, Board of Regents.

Pacific Association of Railway Surgeons, Los Angeles, October 7 and 8, 1938. W. T. Cummins, M.D., Secretary, Southern Pacific General Hospital, San Francisco.

Medical Broadcasts*

Los Angeles County Medical Association

The radio broadcast program for the Los Angeles County Medical Association for the month of October is as follows:

Saturday, October 1—KFI, 9:00 a. m., The Road of Health; KFAC, 11:30 a. m., Your Doctor and You.
Thursday, October 6—KECA, 11:00 a. m., The Road of Health.
Saturday, October 8—KFI, 9:00 a. m., The Road of Health; KFAC, 11:30 a. m., Your Doctor and You.
Thursday, October 13—KECA, 11:00 a. m., The Road of Health.
Saturday, October 15—KFI, 9:00 a. m., The Road of Health; KFAC, 11:30 a. m., Your Doctor and You.
Thursday, October 20—KECA, 11:00 a. m., The Road of Health.
Saturday, October 22—KFI, 9:00 a. m., The Road of Health; KFAC, 11:30 a. m., Your Doctor and You.
Thursday, October 27—KECA, 11:00 a. m., The Road of Health.
Saturday, October 29—KFI, 9:00 a. m., The Road of Health; KFAC, 11:30 a. m., Your Doctor and You.

Silicosis.—Addressing the World Silicosis Conference, under the auspices of the International Labor Office, Geneva, Switzerland, Dr. R. R. Sayers, Senior Surgeon of the Division of Industrial Hygiene of the United States Public Health Service, declared it was the view of his Division that no worker should be removed from work to which he is accustomed, and at which he is able to earn his living, merely because a diagnosis of simple silicosis has been made.

"We hold, rather," Doctor Sayers explained, "that the atmospheric dust in which he works can and should be brought within safe limits. If this is done, his silicosis will not, we feel, advance appreciably more rapidly than if he were made a clerk or given outdoor employment. And if it is not done, removing him and putting a fresh man in his place will expose another worker to the same hazard.

"We urge that the man be left and the dust removed, rather than that the dust be left and the man removed.

"When active tuberculosis exists, it is another matter. Every tuberculous worker should be removed from a dusty industry, put under treatment and not permitted to return. Any further exposure to silica will be harmful to him and he constitutes a danger to his fellow workers."

* County societies giving medical broadcasts are requested to send information as soon as arranged (stating station, day, date and hour, and subject) to CALIFORNIA AND WESTERN MEDICINE, 450 Sutter Street, San Francisco, for inclusion in this column.

New Director of La Vina Sanatorium.—Announcement has been made that Dr. Carl R. Howson of Los Angeles has been offered, and will accept, the medical directorship of La Vina Sanatorium. Doctor Howson, however, will continue in private practice and will maintain his offices in Los Angeles. He has accepted the La Vina directorship on a part-time basis.

Suggested Item on Humane Dog-Pound Law.—A layman, Mr. George E. Coleman of Santa Barbara, who is much interested in the defeat of the proposed Humane Dog-Pound Law—Initiative No. 2—has prepared a statement for possible use in physicians' offices. The text follows:

TO OUR PATIENTS

Your presence in this office denotes that you are suffering and probably have confidence in your physician. If so you will believe him when he tells you that by far the larger part of knowledge used in the diagnosis, prevention, or cure of disease has been gained directly or indirectly by the humane use of animals in medical research. If you are grateful for any benefit received from the medical profession, you will wish this knowledge extended to include those diseases which are now incurable.

Some of the proposed legislation now before the voters in this State, if passed, will be a menace to your health and welfare. You are urged to vote against all antimedical and antiscientific amendments or propositions. Please vote "NO" on Number 2, State Humane Pound Law.

Fair Exhibit to Reveal Mysteries After Birth.—While many of the secrets of birth remain hidden from the eyes of science, the former secrets of what transpire after birth are to be revealed in heroic proportions by the University of California as a part of its display at the Golden Gate International Exposition in 1939. Those microscopic germs of life, the plant and animal cells are to be "blown up" to giant size and literally taken apart, bit by bit, so that all might see how they develop and control life and its many manifestations. The protein molecules that make up the cells in animal bodies, and the cellulose molecules that make up plant life, will be magnified literally millions of times. Each of these molecules will be shown as composed of hundreds of atoms of carbon, oxygen and hydrogen, with a relatively few atoms of other elements included in the protein molecule. Each atom will be shown in its proper position relative to the other atoms of the molecule, while each atom will be colored characteristically to make the molecular structure more evident.

Following out this design, which will be placed on two spectacular models, one transparency will demonstrate the cellular structure of an oak tree, which is typical of any common plant life and another transparency will show the cellular structure of the house cat as an example typical of the animal kingdom.

Five large illustrated panels will show how these molecules and atoms determine various traits of living plants or animals—the fundamental story of heredity. Here the visitor will be introduced to the chromosomes, microscopic bearers of hereditary characteristics. Here also he will learn of the genes, the presumed molecular units of heredity themselves, which are the actual components of the chromosomes. The visitor will be able to see all of this fascinating cycle of life in action.

In recent years science has done much with the study of these chromosomes and particularly in the vinegar fly; have learned exactly where the invisible genes controlling heredity are located on these chromosomes with relation to each other. A large map of the egg cell of a vinegar fly will show its four chromosomes, and will locate various hereditary factors on these chromosomes, illustrating many of them by small colored transparencies.

Healthy Child Is Bright One.—More important to school children than the three R's are the A-B-C's of health education, declares Dr. L. C. Goffin, head of health education for Los Angeles City Schools, who has just been appointed a member of the teaching staff of the University of California Extension Division.

"School health education is now widely recognized to be the most important phase of school health service and the most fruitful branch of general public health education," says Doctor Goffin, who will instruct a course in school health education for the state University Extension Division, beginning September 23.

"A modern school health education program aims to train children in healthy habits of living, endow them with wholesome and discriminating attitudes toward health and disease and give them a sound foundation of health knowledge. It attempts to interpret all phases of life in terms of health. It considers not only the mental and physical health of the individual, but strives to inculcate a sense of civic and social responsibility for community and national health."

Squibb Institute for Medical Research.—The Squibb Institute for Medical Research of New Brunswick, New Jersey, announced the opening of the Institute as for Tuesday, October 11. The program of opening exercises follows:

Welcome. Mr. Carleton H. Palmer, President, E. R. Squibb & Sons.

The Squibb Institute for Medical Research, Dr. John F. Anderson, Vice-President, E. R. Squibb & Sons, Director of Biological Laboratories.

Clinical Investigation, Dr. George R. Minot, Director, Thorndyke Memorial Laboratory Boston City Hospital and Professor of Medicine at Harvard University.

Industrial Laboratories and Clinical Research, Dr. Russell M. Wilder, Professor of Medicine, Mayo Foundation, Rochester, Minnesota.

Biology and Medicine in Coöperation, Professor August Krogh, Professor of Animal Physiology, University of Copenhagen, Denmark.

The Usefulness of Useless Knowledge, Dr. Abraham Flexner, Director, the Institute for Advanced Study, Princeton, New Jersey.

The American Congress on Obstetrics and Gynecology.—The first American Congress devoted to a consideration of medical nursing and other problems associated with human reproduction was held in Cleveland, Ohio, from September 11 to 15, 1938, inclusive. It was designated as the American Congress on Obstetrics and Gynecology. The promotion and sponsorship of the Congress was delegated to the American Committee on Maternal Welfare, Inc. The latter includes the following organizations in its membership:

American Association of Obstetricians, Gynecologists, and Abdominal Surgeons.
American College of Surgeons.
American Gynecological Society.
American Hospital Association.
American Nurses' Association.
American Protestant Hospital Association.
American Medical Association Section on Obstetrics and Gynecology.
American Public Health Association.
Central Association of Obstetricians and Gynecologists.
Chicago Maternity Center.
Maternity Center Association of New York.
National Medical Association.
National League of Nursing.
National Organization for Public Health Nursing.
New England Obstetrical and Gynecological Society.
Pacific Coast Society of Obstetrics and Gynecology.
Southern Medical Association.
United States Bureau of the Census.
United States Children's Bureau.
United States Public Health Service.

The purpose of this Congress is to afford opportunities for discussing and publicizing the problems associated with human reproduction and the health of women and new-born babies. . . .

The Nevada State Medical Association.—The thirty-fifth annual session of the Nevada State Medical Association was held at Reno, Friday, September 23, and Saturday, September 24.

Horace J. Brown, Secretary-Treasurer, reported an excellent program and attendance.

High Authority on Tropical Diseases Visits San Francisco.—Dr. Philip Manson-Bahr, Director of the Clinical Division, London School of Tropical Medicine, and one of the world's foremost authorities on tropical diseases, visited in San Francisco to deliver a series of lectures in this city and Berkeley. The first appearance was before the San Francisco County Medical Society. Later he addressed the students and staff of the University of California Medical School, San Francisco. Thursday evening, September 1, he spoke at Berkeley before the Berkeley chapter of Delta Omega, national public health honor society.

Doctor Manson-Bahr is the protegé and son-in-law of the late Sir Patrick Manson, "Father of Tropical Medicine," and holds a number of responsible posts under the British Government, among them being consultant in tropical medicine in the Royal Air Force and examiner in tropical medicine to the Royal College of Physicians and the Royal College of Surgeons. While here Doctor Manson-Bahr attended the meetings of the National Bacteriological Society in the Hotel Fairmont.

American Public Health Association.—The scientific program of the sixty-seventh annual meeting of the American Public Health Association in Kansas City, Missouri, October 25 to 28, will engage the attention of more than 3,500 of the nation's health authorities, and indicates how closely the organization's Program Committee has been following national trends in public health progress.

There is considerable emphasis on the five major diseases which are being attacked throughout the land with Government funds. The grave problem of maternal and infant mortality receives its share of attention. A special session is devoted to a discussion of "Public Health Aspects of Medical Care" which it is expected will be one of the most significant of the entire conference, with exponents of the National Health Program, spokesmen for organized medicine and representatives of the newly recognized medical consumers, the public, on the platform.

The recruiting and training of public health personnel for the specialized tasks the expansion of health services are creating and for which trained workers are seriously lacking, is a major note in the varied program. The health department as a business organization is a new concept which will be treated by the special session method. Administrative procedures, accounting measures, including cost-accounting, will be considered. Many health departments are now on a parity with million-dollar enterprises and special techniques and formulae for the conduct of the big business of public health are definitely needed.

More than four hundred papers and reports will be presented and discussed in the four days the public health profession is in convention. The delegates are drawn from every state in the Union, from Canada, Cuba and Mexico, and from every branch of public health practice. This makes necessary many individual meetings of the Association's ten sections—Health Officers, Laboratory, Vital Statistics, Public Health Engineering, Industrial Hygiene, Food and Nutrition, Child Hygiene, Public Health Education, Public Health Nursing, and Epidemiology—where rock-bottom topics of interest to specialists alone are talked about and, in addition, sessions involving two or more sections where subjects of broader import cut across the lines of the Section organization. A number of symposia will bring together three and four of these divisions on such subjects as The Phosphatase Test in the Control of Milk Pasteurization; The Use of Biological Products; Water and Sewage; Frozen Desserts; Typhoid Fever; Pertussis; Nutritional Problems Industrial Hygiene.

For further information address The American Public Health Association, 50 West Fiftieth Street, New York, New York.

New York Polyclinic Medical School and Hospital. The New York Polyclinic Medical School and Hospital recently announced the opening of the Urological Department in its new clinic building. The medical profession is cordially invited to inspect this department, which is under the supervision of Drs. Joseph F. McCarthy, Daniel A. Sinclair, David Geiringer, and Howard S. Jeck and their associates.

The American Social Hygiene Association.—Plans for an expanded program of education in syphilis control and social hygiene to reach ultimately 35,000,000 young men and women throughout the nation were announced in New York recently by Dr. William F. Snow, Chairman of the Administrative Committee of the American Social Hygiene Association.

These activities, made possible by an anonymous contribution of $25,000 will attempt, in addition to bringing knowledge of the venereal diseases before youth, to provide biological information and guidance in preparing young men and women for stronger and more enduring marriage and family relations, the announcement stated.

This gift, ear-marked for the youth project, brought the total contributed to the fund being raised by the Association's National Anti-Syphilis Committee to $155,015.

"Of the nation's 35,000,000 individuals between sixteen and thirty years of age, it is estimated that about 5,000,000 are suffering from syphilis or gonorrhea," said Doctor Snow. "No other dangerous communicable disease takes as many victims from this age group as these twin plagues which can be curbed and can be cured."

The program will get under way by October 1 and is expected to reach its peak of intensity for the year around Third National Social Hygiene Day on February 1, 1939.

During the campaign among youth, appeals will be made for continued coöperation of press and radio to supplement the home, church, and school. Leaflets, posters, handbills, and a special "newspaper" are being designed to aid in teaching young persons the facts about syphilis and gonorrhea, how exposures are avoided, and what treatment is necessary when infections occur. These same educational facilities will be utilized to assist them in preparing for lasting and happy marriages.

Science May Have Found Substitute for Morphin.—The development of a new drug which apparently has many of the pain-relieving properties of morphin and codein, but appears to lack some of the addiction factors of the former, is announced by the pharmacy laboratories of the University of California. The new drug and its properties were first announced by Dr. Chauncey D. Leake, Professor of Pharmacology in the University, at the recent meeting of the British Pharmacologic Societly at Oxford University, London, England. The studies of the drug had been made by Dr. Leake, Dr. George Emerson, Associate Professor of Pharmacology at the University of West Virginia, and Benedict Abreu and N. M. Phatak, graduate students in pharmacy in the University of California.

They state that the experimental studies on DNPM are of such interest that the drug deserves careful clinical trial as a possible substitute for morphin.

The new drug is a combination of dinitrophenol, the fever-producing drug, recently used with unfortunate results in the uncontrolled treatment of obesity, and morphin. Strikingly, the new drug which is called Dinitrophenylmorphin, or DNPM, has none of the action of dinitrophenol, but is much more like codein and morphin.

Experiments on animals and normal human subjects indicate that the drug has pain-relieving properties and respiratory effects somewhat similar to morphin and greater than codein. Animal experimentation also suggests that it may have less addiction effect than morphin. But the University workers are careful to point out that any chemical which produces a feeling of well-being and relief from pain, may become an addiction drug in a person desiring to escape from an unpleasant health environment. These studies are being published in the new University of California series on pharmacology now being issued by the University Press.

Forced Population Increase May Invite Famine.—Before any nation or people undertake to increase the population through mass marriages or any other device, it should determine whether the nation's food resources can accommodate such increase, or disaster may result. This was stated in a paper read recently before the Third International Congress of Tropical Medicine and Malaria, meeting in Amsterdam, Holland, by Dr. Alfred C. Reed, Professor of Tropical Medicine in the University of California.

Doctor Reed is president-elect of the American Society of Tropical Medicine, which is meeting in Oklahoma City, Oklahoma, November 14 to 17. At that meeting he will assume the presidency, which he will hold during the year 1939. At present he is visiting a number of hospitals in London. He departed on July 23, his schedule calling for visits to Beirut, Damascus, Jerusalem, Cairo, Rhodes, Athens, Italy, France, Stockholm, Copenhagen, London, and Holland.

Fourth International Congress on Comparative Pathology.—The National Research Council of Rome, Italy, has recently published a pamphlet containing the program and rules of the Fourth International Congress on Comparative Pathology, which, as decided at the 1936 Congress held in Athens, Greece, will be held in Italy May 15 to 20, 1939.

The Congress will comprise three sections: (1) Section on Human Medicine; (2) Section on Veterinary Medicine; (3) Section on Phytopathology.

Papers submitted to any Section must be related to the main topic and be as concise as possible. A summary of about one hundred words should also accompany the papers, which must be in by March 31, 1939, at the very latest. The official languages of the Congress will be English, French, German, Italian, and Spanish. The general reports will be published in the original language, with summaries in the five official languages. They will be distributed to all members before the opening of the Congress.

Application and fee may be sent either through the applicant's National Committee or directly to the Secretariat of the Congress, Consiglio Nazionale delle Ricerche, Piaz zale delle Scienze, Roma, Italy.

Press Clippings.—Some news items from the daily press, on matters related to medical practice, follow:

Medics Face Anti-Trust Action

Society Accused of Boycotting Health Groups

Warning Given

Washington, July 31.—(INS)—The mighty American Medical Association tonight became the announced target of the Administration's anti-monopoly drive, and its officers prospective defendants in federal criminal proceedings.

Accusing the American Medical Association of a country-wide boycott of coöperative health groups, the Justice Department announced it will seek indictment of the responsible physician-officers by a District of Columbia grand jury.

A policy statement signed by the chief of the department's antitrust division, Thurman Arnold, declared the boycott a violation of the Sherman Act. Attorney-General Cummings approved the statement.

Blasts Organization

Arnold's criticism blasted organized medicine generally. He charged the profession with failure to provide "adequate medical care" at a cost within the public's ability to pay.

Instead, he said, the profession, through the American Medical Association, has tried to throttle "an illuminating experiment" in low-cost medical care by ostracizing physicians employed by health groups and denying them hospital facilities.

Policy of the American Medical Association, and its affiliated medical society of the District of Columbia, towards Group Health Associates, Inc., of Washington, was cited by Arnold as a typical boycott on which the criminal proceedings will be based.

Door Left Open

The district society's officers will be named defendants along with the American Medical Association's. The statement mentioned no names.

Arnold made plain the expected indictments will "not necessarily charge a crime of moral turpitude." He said the department considers the offenses charged are no reflection "upon the character of the persons who may be involved."

Aim of the proceedings, he announced, is to "leave the door open to a constructive proposal (from the defendants) at any stage of the litigation."

Arnold thus pointed a way for the American Medical Association, of its own volition, to free its officers of possible penalties by entering into a consent decree abandoning policies which, the statement said, might in any case only prove to be "misdemeanors."

The proceedings, first the government has ever proposed against a national professional society, rest on an untested interpretation of the antitrust laws. Arnold said the department holds the statutes prohibit combinations to restrain competition "in services as well as goods."

The move was regarded as the government's answer to the attitude expressed by American Medical Association officials at the national public health conference here ten days ago, wherein the officials opposed federal aid and intervention in medicine.

The American Medical Association's position, as expressed by Dr. Morris Fishbein, editor of its *Journal*, was that "the physician must remain the master in the house of medicine."

Critical of Government

He and Dr. Irvin Abell of Louisville, American Medical Association president, declared the Administration's proposed $850,000,000-a-year health program, to be financed jointly by the Federal Government and the states, was "unworkable," and that "food, housing and jobs" should be the government's first consideration. They insisted the Association always had coöperated with the federal public health service.

A bid for "coöperation" of the American Medical Association officers in the government's anti-monopoly proceedings was extended by Arnold, who said the department was publishing a "warning of violations as far in advance as possible, in fairness to them, and for their own protection."

* * *

Chicago, July 31.—(INS)—Dr. Morris Fishbein, editor of the *American Medical Association Journal* and official spokesman of the American Medical Association, tonight refused to comment on the announcement from Washington that the Association is to be investigated by a federal grand jury.—Los Angeles *Examiner*, August 1.

* * *

Medics Shun Truce in Antitrust Fight

Washington, Aug. 1.—(INS)—Government officials hinted tonight they may be willing to wind up the antitrust proceedings against the American Medical Association with a consent decree.

The inauguration of criminal action against the Association prompted a flood of broadsides at the Federal Government by officers of the American Medical Association, who indicated they would resist the consent decree course and fight the case through the courts.

Civil Suit

A source close to Thurman Arnold, chief of the antitrust division, said the grand jury investigation probably would not be inaugurated until mid-September. Following this inquiry, the source said, it is possible that the government wil seek to drop the criminal proceedings already instituted and open a civil suit which could lead to a consent decree.

The Department of Justice's proposed investigation is designed to help "the poor man get excellent medical service at a price he can afford to pay," United States Attorney-General Homer Cummings asserted in Chicago today.

The Justice Department launched its legal proceedings against the Association to 'prevent artificial impediments by organized groups who desire to escape competition from the various attempts which may be made from time to time to bring down the cost of medical care."

National Basis

The department charged that the American Medical Association expelled physicians for becoming associated with the Group Health Association, Inc., in Washington. While the charges were leveled particularly at the activities in the District of Columbia, the investigation will be on a nation-wide basis, the department revealed.

* * *

Palo Alto, Aug. 1.—(INS)—In the face of disapproval of the American Medical Association, the Palo Alto Medical Society, through Dr. Russell V. A. Lee, committee chairman, today announced plans for launching a hospitalization insurance program which for 85 cents a month will provide liberal coverage of hospital expenses.

The 85 cents a month policy will provide its holder with twenty-eight days of hospitalization for each illness suffered during the year. The benefit paid would be $5 a day, which would meet the hospital charge for a bed in a ward and would also cover x-ray, operating room, laboratory and anesthetic charges.—Los Angeles *Examiner*, August 2.

* * *

Medical Insurance

Individual medical insurance, long regarded as impracticable, will be launched in a big way in New York this month. There are organizations in several cities, including Los Angeles, which are offering such insurance in one form or another, but the New York project is on a scale to indicate that this kind of protection may shortly become as generally available as life or fire insurance.

The New York Coöperative Health Association, operating as a non-profit group, announces that, beginning in two weeks, it will provide policyholders paying premiums of $2 a month complete medical, surgical and maternity care. The premium for man and wife will be $44 a year; for $20 more each, any and all additional members of the family will be provided for.

It is not charity that is being offered. The plan has been figured out on an actuarial basis and is regarded by its sponsors as a sound business proposition. The plan enables individuals and families of low income to provide against the need of calling in the doctor, at the same time guaranteeing that physicians called on cases involving those insured will have their fees promptly paid. The insured do not have to forego needed medical attention for economic reasons, do not have to look to the public for help in sickness and emergency; the doctors they consult do not have to write off noncollectible bills on their books.

The plan is a natural outgrowth of the group hospitalization movement that has swept the country and which in New York has reached its greatest development. Recent reports showed that upward of 600,000 persons in the metropolis and its immediate area have insured themselves against the hazard of being forced to undergo hospital treatment. The two insurance ideas in combination round out a program of complete financial protection intended to enable subscribers literally to take doctor and hospital bills in stride.

If successful, medical insurance should not only discourage the spread of state medicine, at enormous and growing public cost, but should accomplish the avowed purpose of such paternalism by raising the standard of public health. —Editorial, Los Angeles *Times*, September 3.

* * *

Parties Map Hot Fight for Lieutenant-Governor*

Tremendous Power Wielded by Office Recognized and Will Stiffen Candidates' Battles

Growing recognition of the tremendous power wielded by the Lieutenant-Governor will lead this year to unusually vigorous campaigns in behalf of the various party candidates for the office, it was indicated yesterday.

For many years the public has regarded the office of Lieutenant-Governor of California as comparable with that of the Vice-President of the United States in the relatively slight responsibility exercised by the incumbent.

The heavy vote cast in the party fights for Lieutenant-Governor at the August 30 primaries has convinced political leaders that this time-tattered misconception is vanishing.

Prominent Positions

Thus the candidates for Lieutenant-Governor will occupy prominent positions in party spotlights as the general election campaign gets under way.

In actual authority of office, it is pointed out, the Lieutenant-Governor takes second place only to the Governor—and in some respects the Lieutenant-Governor is even more powerful than his chief. A brief tabulation indicates the extent of some of these official powers:

1. The Lieutenant-Governor is in direct succession to the governorship, in the event of a vacancy in the latter office.

Names Committees

2. He names all Senate committees, including special, interim and investigation committees. As the California Legislature functions under the committee system, the make-up of committees has a direct bearing upon the color

* Note.—This item is of interest because the candidate of the Republican Party for Lieutenant-Governor of California is Walter Scott Franklin, M.D., of Santa Barbara, and formerly Professor of Ophthalmology in the Medical School of the University of California.

See also editorial comments, on page 252.

of legislation enacted. Committees may recommend, kill or block bills.

3. In addition to exercising practical control of the Senate through appointment of committees and as presiding officer during Senate sessions, the Lieutenant-Governor is an ex officio member with full voting power of many important boards and commissions.

The sum of all these powers representes an imposing total in two of the three major branches of California's state government: legislative and executive. His diversified authority gives the Lieutenant-Governor substantially more power than is held by the Speaker of the Assembly.

Compact Body

The Senate is a more compact body, furthermore, than the Assembly, and a strong presiding officer can make it a potent factor in dealing with radical and ill-considered legislation.

The Lieutenant-Governor is chairman of the State Advisory Pardon Board. He is a member of the California Toll Bridge Authority and of the Board of Regents of the University of California. He is chairman of the Reapportionment Commission, which reapportions the State every ten years in the event that the Legislature fails to do so, and he appoints persons to prepare arguments for and against initiatives and referendums.

This is only a list of the permanent ex officio offices held by the Lieutenant-Governor. Many similar duties on boards or commissions are delegated to him from time to time.—San Francisco *Examiner*, September 20.

* * *

Attorney-General Rules on Part-Pay Patients in County Hospitals

Attorney-General U. S. Webb ruled last week that county boards of supervisors may allow the admission of patients to county hospitals on a part-pay basis.

"I see no reason," Webb said, "why the board may not adopt some general rule for determining the amounts to be paid by patients who are able to pay a portion of the costs of their hospitalization but who are unable to meet the cost of hospital service in private institutions. It would seem proper that such rules and regulations be established by ordinance, although it may not be necessary that the adoption of rules and regulations be formally made by ordinance unless a county charter requires such action to be taken by ordinance."

The opinion was given to Mrs. Florence L. Turner, State Director of Social Welfare.

Webb also informed Mrs. Turner that patients who pay part of their cost of hospital maintenance could have physicians of their own choosing if the individual boards of supervisors so desired.—Lakeport *Bee*, August 18.

* * *

Court Upholds Health System

City Employees Win Suit Involving Group Medical Service

The San Francisco Municipal Employees' Health Plan today held approval of the State Supreme Court.

The court ordered Controller Harold Boyd and Treasurer Duncan Matheson to make available to the employees' service plan $35,000 impounded pending the court decision.

"There can be no valid objection to the plan," the court ruled. "There can be no question of the power of the city to establish a system of medical care for its employees.

"Proper medical attention . . . should have a beneficial effect on their health and therefore on their efficiency."

In the companion decision, which upheld a lower court ruling banning the Pacific Health Corporation, a western health insurance company, from selling health contracts, the court ruled such sale constituted illegal practice of medicine.

It held the corporation forced members to use its own list of doctors, unless case expenses totaled less than $50.

But the court lauded health service plans with the statement:

"It is possible to bring adequate medical care to vast numbers of persons who can now ill afford it . . . by a carefully regulated statute setting forth terms under which private organizations may offer their services."—San Francisco *News*, September 3.

* * *

Migration of Farm Workers Reduced

Warnings There Are No Jobs Believed Cause of Sharp Drop

Migration of work-seeking farm families into California showed a sharp drop in July and August, compared to the same months of 1937, Jonathan Garst, regional director of the Farm Security Administration, said today.

The number of persons "in search of manual employment" entering the state was only half that of the same month a year ago. In July the figure was 3,987, against 8,035 in 1937, and in August 4,164, compared to 8,156.

Warnings there are more workers now in California than there are farm jobs this year is probably the chief reason for the reduced volume, Mr. Garst said.—San Francisco *News*, September 19.

* * *

Hospitalization Plan Taking Shape

A significant advance in hospitalization insurance will be made within the next week or two when the Palo Alto Hospitalization Group opens offices in this city and inaugurates a campaign, in coöperation with the Palo Alto Medical Society, to enroll residents of the community in an insurance program which for 85 cents a month will provide liberal coverage of all hospital expenses.

The 85 cents a month policy will provide its holder with twenty-eight days of hospitalization for each illness suffered during the year. No person would be insured against a disease from which he was suffering at the time he applied for his policy, but would be covered against other maladies that might develop. The benefit paid would be $5 a day, which would meet the hospital charge for a bed in a ward or would be applied toward a room charge and would also cover x-ray, operating room, laboratory, and anesthetic charges.

Members of the medical society committee which has been working on the plan for more than a year are Dr. Granville Wood, Dr. Jerome B. Thomas, Dr. Edward Liston, Dr. Charles Shepard, and Dr. Russel Lee.—Menlo Park *Recorder*, August 26.

* * *

Hospital Insurance Group Joins District Association

Consolidation of the Associated Hospitals Service Fund, Santa Clara County hospitalization insurance organization, with the Insurance Association of Improved Hospitals, San Francisco Bay region group hospitalization institution, was announced yesterday.

Voted last week by directors of the local group, which has its headquarters at San Jose Hospital, the move has been endorsed by the county medical association, according to J. Philo Nelson, general manager of the Bay region organization.

Letters apprising the local hospital group's 1,200 members were put in the mail yesterday, and the move becomes effective at once.

Fostered by the American Hospital Association, the Bay region association claims 20,000 members, with twenty-five participating hospitals in San Francisco, San Mateo and Alameda counties. Added to this list will be Santa Clara County's several private hospitals affiliated with the county association.

All local members will be included in the consolidated organization, which will retain its insurance association title.

New members must come in under the regulations of the association, which differs from the local organization in that only group applications are received.

Group applications will be considered, Nelson said, from clubs, societies, lodges, luncheon clubs, employees of one firm. Husbands, wives, and children of members also are eligible for membership at special family rates.

Nonprofit Service

Similar in general to the local group's set-up, the association's prepaid hospitalization plan is also nonprofit. Its officers and directors serve without pay. It is qualified as an insurance company under California laws.

It offers twenty-one days of hospitalization for each illness or accident during the policy year, or fourteen days' service in any lawfully operated hospital in the United States or Canada while away from home.

It provides board and room—ward accommodations, or a private room—on payment of the difference in rate.

General nursing care, operating room service, including anesthetic, x-ray, laboratory service, materials, dressings, physiotherapy treatments, ordinary drugs and medicines are covered in the plan.

Rest cures, childbirth, venereal infection, and conditions covered by workmen's compensation act are excluded.

Family Rates

Fees are $1 registration for new members, whether single applicants or families. Monthly rates are 90 cents a month for the employed person making application, 80 cents for his or her husband or wife, 40 cents for each dependent child from 30 days to 19 years of age, and 90 cents for each dependent child over 19.

Payment is to be made through a group collection plan, except in the case of individual members of the present Santa Clara County group who will be included on their old standing.

Persons leaving the group under which they join may continue payment on an annual or semiannual basis. Employed members who pass the age of 65 may continue with-

out change if they remain employed, but dependents and those unemployed will be dropped at 66 years of age.—San Jose *Mercury-Herald*, September 2.

* * *

Board Adopts Final Budget

Total of $64,927,349, Gain of $9,769,436 Over Previous Year

Los Angeles County's final budget for the fiscal year of 1938-1939, carrying total appropriations amounting to $64,927,349, which is $9,769,436 more than last year, was unanimously adopted yesterday by the Board of Supervisors.

Of the $64,927,349 set up, only $35,770,100 will have to be raised by taxation. This, however, is an increase of $3,289,184 over the figure for 1937-1938, which will necessitate a general basic county tax rate of $1.51 on each $100 of assessed valuation, 10 cents over last year's rate.

The new rate, along with a road tax and one for library purposes in certain districts of the county, will be adopted by the supervisors.

Charity Load

A study of the new budget discloses that 74 cents of the $1.51 new tax rate will be used for raising funds to carry the county's staggering charity load, which this year will cost $39,714,036, or $6,892,313 more than last. The heaviest item is for aid to the aged, amounting to $20,212,050, an increase of $4,362,050 over last year. . . .—Los Angeles *Times*, August 30.

* * *

Low Cost Medical Care Recommended

Necessity Revealed for Small Incomes

Ogden (Utah), Sept. 1.—(AP)—The Utah State Medical Association officially recognized today the necessity of supplying medical care to "low income and indigent groups."

Consideration Urged

The house of delegates, policy-forming body for the State Association, recommended at the Association's annual convention that the state president appoint a committee to "give specific consideration to some form of supplying medical care to low-income and indigent groups."

Association officials pointed out that the proposal is "socialized medicine" only in the sense that low-cost medical service would be provided those with little or no means. It does not contemplate "free" general medical service, they said.

Found Difficult

"Indigent people of Utah are receiving medical care at present at the courtesy of the doctors, but the low-income groups are finding it very difficult, in some cases, to obtain proper care," said W. H. Tibbals of Salt Lake City, executive secretary of the Association. "It is hoped that a plan whereby persons with low incomes can pay for their own medical care may be worked out."—San Francisco *Examiner*, September 2.

* * *

Rabies Diagnosis for Deer Confirmed by Doctor Proescher

Rabies is spreading to deer in Santa Clara County, a report made by Dr. Frederick Proescher, pathologist at the County Hospital in San Jose, to Dr. C. M. Burchfiel, county health officer, disclosed today.

Doctor Proescher, after examining the brain and carcass of a deer found dying on the J. J. Nunes ranch on Toyon Avenue, east of here, Saturday morning, said the large buck had died of rabies.

Sheriff's deputies and game wardens said probably the deer was pursued and bitten by a mad dog, wandering from the hills to the Nunes ranch. The deer was alive when found by Nunes, and was foaming at the mouth and had an infected leg. The animal died shortly after being found.—San Jose *News*, August 22.

* * *

Rabies Menace Widespread

Los Angeles County also has a rabies condition—also a state quarantine on dogs. Which irks the southern county. The county health officer, however, who realizes the menace dogs running loose upon the streets are to the public, asserts the quarantine will remain in effect unless—or when—"the county and city of Los Angeles and the various other smaller cities pass a regular ordinance requiring that dogs be kept on leashes on the streets and other public places."

In Los Angeles County 4,564 persons have been bitten by dogs—372 of whom by dogs definitely established to have been suffering from rabies, and 360 rabid animals have been picked up in the county area.

Rabies will never be stamped out in Los Angeles, San Jose or any other community until the quarantine is strictly obeyed. It is strange that dog owners, whose own animals are in danger of being bitten by rabid dogs, should not realize they, themselves, may be victims of their own pets. For the common safety of the community, the quarantine must be rigidly enforced until all danger of rabies is ended.—San Jose *Mercury-Herald*, September 1.

* * *

Doctors and Bets

Any Pajaro Valley doctor with "sporting blood" should pause and ponder on the experience of a King City physician.

According to a story in the *Rustler-Herald*, King City paper, Dr. Charles T. Bullard was certain Mrs. John Dukellis' third child was to be a girl. Mr. Dukellis, hotel operator, said it was going to be a boy. So, they entered into a little wager. If the child was a girl, Doctor Bullard was to get double his usual fee. If it was a boy, there would be no fee.

Eustratis Nicholas Dukellis arrived—a "free man." The doctor took his leave—sans fee—and Mr. Dukellis beamed over the cradle.

There is a moral some place in this little story, but we feel that Doctor Bullard should be the one to point it out.—Editorial, Watsonville *Register-Pajaronian*, August 20.

* * *

Butte Asks Help to Care for Migrants in Camp

Federal and state relief administrations will be asked to assist Butte County in providing hospitalization and medical aid for more than 700 people in the federal migrant camp at Gridley. Supervisors were told this week that Butte County cannot continue to stand the cost.—Orland *Unit*, August 18.

* * *

Legal Opinion Needed, Would Get PWA Help

A 15-cent tax, with which to construct a new county hospital, will be placed in the Glenn County budget if the Attorney-General rules that such procedure is legal at this time.

This decision was taken unanimously by the supervisors late Saturday on a motion made by Supervisor Picknell, and seconded by Supervisor Murch.

The hospital would cost approximately $55,000, with the county furnishing roughly 55 per cent, or $29,000, through the tax, and the PWA furnishing the remaining 45 per cent.

Would Cost $55,000

The tax would increase the county's inside rate from $1 as of last year to $1.29, while the outside rate, which was $1.20 last year, would be raised to $1.54.

The district attorney was instructed to consult with the State Attorney-General's office and report to the supervisors at their meeting Wednesday.—Willows *Journal*, August 22.

* * *

Glenn County Doctor Faces Ouster Move

Young Mother's Death Stirs Criticism; Vote Delayed by Board

Willows, Aug. 24.— . . . Regarding construction of a new county hospital, the board decided to postpone the project until next year, after a ruling was received from Attorney-General U. S. Webb, holding that a proposed 15-cent special tax would be invalid.

Webb said the original budget did not provide for the tax and that it could not be added now. Supervisors said they did not believe voters would approve a bond issue for the $55,000 project.

It had been planned to obtain 45 per cent of the funds needed from a PWA grant and to raise the balance through the special tax.—Sacramento *Union*, August 25.

* * *

This and That

Glenn County will have to get along with its present county hospital building until next year.

The supervisors, having found that they could not insert a 15-cent rate into the budget this late, have dropped the plan. Inasmuch as the PWA has set October 1 as the deadline for making grants of this character, and since it is practically impossible to take care of details for a bond election now, the matter will probably rest until budget time next summer.

A bond election must be called at least thirty days before it is held.

Into the calling of such an election must go much careful work. Usually no political subdivision calls an election before it has been assured the bonds can be sold, and bond companies take plenty of time for their own investigations.

It is highly doubtful that the necessary two-thirds vote could be obtained for the bonds, especially in view of the muddle over county hospital laws.

Most Glenn County residents favor a new hospital because they anticipate that they, or their families, will get some direct use from it.

In some counties, notably Colusa, such is the case.

But most legal authorities hold that the law is not being followed strictly in Colusa, since a public institution cannot be put into competition with private enterprise.

Some attorneys have said that, inasmuch as there is no hospital in Glenn County, the hospital might be opened to the public. But there is serious doubt about this, too.

In seeking legislation to modify the situation, lawmakers would certainly meet opposition from the medical profession, which opposes use of county hospitals for public use, even though few private hospitals can be made to pay.

The supervisors may find the situation changed entirely when they meet next summer.

Congress may solve a large part of the program at this winter's session, since socialized medicine is scheduled on the "must" program of the New Deal. In such an event, the picture, in so far as Glenn County is concerned, will be a much different one.—Willows *Journal*, August 24.

* * *

Reports Made on Progress to Two Clubs

"Science Has Discovered Ways to Overcome Injuries," Women Told

More emphasis on prevention!

This was the underlying theme of two gatherings held yesterday, both called in the interest of work for crippled children. Better public understanding of work being accomplished was considered at the annual meeting in the Palace Hotel of the California Society for Crippled Children.

Progress which has been made was discussed for the Sunbeam Society for Handicapped Children at its first fall session in the P. G. & E. Building, with Mrs. D. L. Breslauer presiding. Mrs. Gertrude Folendorf, administrator of the Shrine Hospitals in the United States, said in her talk to this group:

"There is little excuse now for injuries of children at birth, which result in spastic deformities. Modern science and research has discovered ways of overcoming such injuries. Prospective mothers may be advised of ways in which birth can be made simple."

Action Urged

In this connection, Mrs. Folendorf urged defeat of the so-called Humane Pound Act on the November ballot. She said:

"This act would stop experimentation. Better experiment on animals than on a child. Many diseases have been eliminated through experiments with animals. And in these laboratories the animals do not suffer. They are cared for as carefully and kindly as are patients in hospitals."

Among the greater modern advancements in work with crippled children, Mrs. Folendorf said, is the fact that employers are realizing that handicapped persons, if well educated and trained, may fill places in society as capably as others. . . .

Plea Made

California's migrant problem was brought more closely home to urban dwellers when Dr. D. C. Williams of Madera said:

"Our problem becomes the city's problem, later on. Right now our problem is to deal with the crippled children of migrants, and there are many of them. The State of California should take action on their needs. A state that is paying 44 cents to relieve able-bodied men is not paying one cent for crippled children. The state should do the same thing for these handicapped ones that it is doing for tuberculous children. If nothing is done these handicapped children will grow up to be dependent citizens."

Mrs. T. E. Shucking, president of the San Francisco Guild for Crippled Children, won applause when she reported on the activities of this local group, which has continued its service during the summer months."—San Francisco *News*, August 26.

* * *

Too Many Children Are Born to Insane, Is Claim

Editor of *The Bee*—Sir: In an eastern city is an institution for the care of the insane with a capacity for 1,000 inmates. In 1934, 1,000 were in the institution, and 1,000 on the waiting list outside. During 1934 there were 650 offsprings born to the thousand on the outside. A check-up on the same institution for 1936 disclosed that there were 1,140 in the institution, with 1,200 on the waiting list, and 1,300 eligibles who had not registered. I have no report on the number of offspring born to those on the outside in 1936, nor have I any report for the year 1935.

If 1935 were an average of 1934 and 1936, then the number in the institution in 1935 would have been 1,070, and the eligibles on the outside would have numbered 1,750. If the birth rate among those outside was the same for 1935 and 1936 as for 1934, then there would have been born to that group in 1935 and 1936, 1,137 offsprings. This, plus the 650 for 1934, would give 1,787 offsprings born to insane people in three years.

Recent scientific reports state that over 41 per cent of all insanity is known to be hereditary. If this be correct, then 736 of the 1,787 offsprings will some day be insane. The average cost of care for the insane approximates $400 a year. Thus, the 736 insane born of insane parents in one community in three years costs the taxpayers nearly $30,000 a year, and this amount is increasing yearly. Had these insane people been sterilized, the taxpayer would have been relieved of a tremendous burden, society relieved of a great social problem, and the individuals themselves benefited most of all.

Is it not time that the taxpayers, as well as society at large, awakened to their responsibility and opportunity?—Dr. Eugene H. Pitts, Sacramento, August 26, 1938 (from Letter Column of *The Sacramento Bee*, August 27).

* * *

Group Medicine

Cleveland, Sept. 9.—The economics committee of the Academy of Medicine today proposed hospital insurance for the general public at $9 yearly. The committee will work out details, then put it to a vote of the academy's membership.

The medical insurance would cost the citizen 75 cents a month, or $9 a year. It would pay $6 daily toward his doctor bills for every day up to twenty-one days spent in a hospital during the year, or a maximum payment of $126.—San Francisco *News*, September 9.

* * *

Webb Rules Out Doctors' Contract

County boards of supervisors have no legal right to contract with private physicians to care for the indigent sick at fixed fees, Attorney-General U. S. Webb ruled yesterday.

Webb agreed with District Attorney Earl Redwine of Riverside County that under the state political code such care for the sick must be administered in hospitals and institutions.—San Francisco *Chronicle*, September 11.

* * *

Creation of Los Angeles County Institutions Commission to Be Urged

Creation of another county commission, a seven-member board to have supervision over General Hospital, Olive View Sanatorium, Rancho Los Amigos and all medical treatment given at public expense, will be urged upon the board of supervisors at their meeting next week.

Such an "institution commission" is being sponsored by the Los Angeles County Medical Association. In a letter to the board the association declared that a similar commission has functioned in Oakland since 1917 and has proved satisfactory.

The members of the commission, to be named for staggered terms of seven years each, would receive no salaries but would be given an honorarium of $20 for each meeting attended, with meetings limited to three in any month.

Adoption of the plan would require a charter amendment to be adopted by vote of the people and it then would remain in existence perpetually, unless the creating amendment were repealed by vote of the people.

"No public health problem in California has closer connections with medical practice than publicly supported hospitals," the association's letter, signed by Dr. George Kress, president, stated. "These institutions can be potent factors in determining what the future shall bring to scientific and organic medicine.

"We are asking the proper medical society committee in each county of the state to consider this problem seriously at once, despite the fact that it is the middle of vacation months."—Clearwater *Journal*, September 1.

* * *

Doctors Seek Another Plan

Socialized Medicine Is Up Before Society Council

Alternatives to a political program of socialized medicine were among the subjects under consideration today at a regular meeting of the Council of the Medical Society of the State of New York, 2 East 103rd Street. While the meeting was not open to the public, it was known that plans were in formulation for State representation for the forthcoming conference of the House of Delegates of the American Medical Association in Chicago when proposals made by the National Health Conference in Washington in July will come up for discussion by representatives of 108,000 doctors.

The case against compulsory health insurance has been published in pamphlet form by the Medical Society of the

State of New York with arguments marshaled by Dr. Frederick E. Sondern, a past president of the society.

In a foreword, the pamphlet states: "Subtle and persuasive forces are at work influencing the public mind in favor of State medicine, and its substitutes, socialized medicine and compulsory sickness insurance."

Doctor Sondern writes: "Many physicians feel poignantly that an injustice is done us when, by implication and direct statement, the public is asked to believe that the doctors of the nation as merchants of medicine are obstructing, for purely selfish reasons, a movement to provide adequate medical care for the masses. . . .

"With the feeling that it is neither necessary nor desirable to distrust the competent man, nor to impugn his motives, this discussion is submitted for the thoughtful consideration of the public."

He says in part:

Sees Deterioration of Service

"Medical men, with few exceptions, are opposed to the compulsory sickness insurance scheme. They believe it will not, in fact, bring adequate medical care to those whom it serves, but an inferior quality of care to that which is at the disposal of the wage-earning group today. Medical men believe the plan will result in a deterioration of the physician's standards of excellence, that it will foist upon society a bureaucratic system politically controlled, which will feed and fatten at the expense of the workman and interfere, to the great damage of the patient, with the relationship between him and his physician. These considerations strike at the very vitals of the profession. We are moved deeply by consequences which we envision in this country if compulsory sickness insurance becomes effective, and we find when we travel in Europe where this type of practice has been established, evils which could not be avoided, and perhaps would be aggravated, here."

As It Is Abroad

Doctor Sondern avers that, in England, "the insured patient has little regard for his panel doctor and in the event of a serious condition, in his own words he secures 'a real doctor' even if it takes the last shilling he has."

He states that 50 per cent of the patients who go to free clinics in England do so rather than consult their panel doctor because the panel doctor is so rushed by the long line-up of cases at his door that he has no time to make a careful diagnosis.

He quotes Gustav Hartz of Berlin as saying relative to the state insurance system there: "The insured workman becomes a second-class patient. The mass demand compels a limitation in the use of medicines. Doctors must not prescribe what they consider good for the patient; they are only allowed to give remedies entered in a book of medical regulations for insurance purposes. Medical science has become a cheap article, and doctors have given up conscientious treatment."

To the argument that socialized medicine aims to help those who cannot afford to pay for medical care, Doctor Sondern replies: "Throughout the depression, and even before, we have offered our services unstintingly in the alleviation of the miseries of those who are unable to pay for medical care as well as to those able to pay only part of its cost. This is a traditional, historic obligation. So well has this emergency been met under the prevailing system of practice that it can be said that there is little lack of medical care if the person needing it, or his family, will seek it. . . . Physicians do not eject patients from their offices because they do not have cash in their hands, nor do clinics close their doors to them. If the patient cannot pay the doctor in full he pays less; if he has nothing he is treated without cost or is referred to institutions which care for indigent patients."—New York *Sun*, September 8.

* * *

Testimonial for Republican Nominee to Post of Lieutenant-Governor

Dr. W. S. Franklin Luncheon in San Francisco

Many reservations have been received for the testimonial luncheon to be tendered Dr. Walter Scott Franklin, Republican nominee for Lieutenant-Governor, at the Palace Hotel on Tuesday, October 4. A crowd that will tax the capacity of the Rose Bowl was predicted by Dr. Howard Morrow, chairman of the committee on arrangements.

The luncheon will be in the nature of a "welcome home" for Doctor Franklin, who is a native San Franciscan, and practiced his profession here for twenty-five years.

South of Market Boy

Doctor Franklin was born at Seventh and Minna streets, is a member of the Native Sons of the Golden West and of the South of Market Boys. He is a graduate of Stanford Medical School, and served his interneship at the French Hospital. For ten years he was head of the Department of Eye Diseases at the University of California Medical School. . . . —San Francisco *Examiner*, October 3.

Health Plan Abandoned

Resettlement Project for Coöperative Care Found Impractical

Gone with the wind is the Federal Resettlement Administration's experiment with coöperative health groups in this county, it was learned yesterday.

After two starts with two different groups, it was decided not to start others, and the two eventually passed into oblivion by the dissolution route.

Formed in 1936

With something of a flourish, the resettlement division of the Agricultural Adjustment Administration started in San Gabriel Valley late in 1936 to organize a health association.

Debtors to the Administration were taken into the San Gabriel Valley Health Association under leadership of a "federal coöperative specialist" and later a second group was formed with the name San Fernando Valley Health Association, with others in the offing.

Medical Care Given

The plan provided that persons who had borrowed money from the AAA could pay $2 a month and upward for group medical care, the monthly payments to be made by the Government and later to be repaid by the beneficiary to the Government along with his original loan.

A private concern providing the medical aid, it was explained at the federal office yesterday, found that the business was not sufficiently remunerative, no further associations were formed and those that had been formed were dissolved.—Los Angeles *Times*, September 21.

* * *

Insurance for Seventeen Thousand October 1

Group insurance for more than 17,000 municipal employees and their registered dependents will go into effect October 1, officials of the Health Service Board announced today.

Today will be the last day for registration of dependents.

A panel of doctors, numbering one thousand names, and a list of acceptable hospitals will be supplied each insured person. The employee pays about $2.50 a month and an additional dollar for each dependent insured under the plan.—San Francisco *Call-Bulletin*, September 21.

* * *

Seek to Cut Los Angeles County Expenses

An economy wave, with provisions for savings estimated at more than $100,000 a year, swept over the Board of Supervisors today.

Supervisor John Anson Ford announced that later in the day he would introduce a resolution asking that the county health service be offered to the city under contract.

Under the plan, the City Health Department would be abolished—City Health Officer George Parrish losing his job—and the city would use the county's health services, Ford said.

Others Use Plan

Many cities in the county already are operating under such a setup, he said.

Chairman Roger Jessup commented:

"From studies I have read, the indications are that city and county taxpayers could save $100,000 a year by such a procedure, which would eliminate duplication of services by the two health departments." . . .—Los Angeles *Herald-Express*, September 27.

* * *

Kern's Hospital Policy Topic of Planned Session

Doctors and Supervisors Will Hold Parley to Discuss Rules

To discuss county hospital policy with respect to patients having choice of personal physicians at the Kern General, the five members of the Board of Supervisors will meet with five members of the Kern County Medical Society in the near future. The supervisors today voted to have Chairman Roy Woollomes arrange this meeting after the board had received a letter from the medical association's board of directors signed by Dr. C. S. Compton, secretary.

This letter read in part:

"The medical profession feels that any patient who is not classed entirely as indigent should have free choice of physician, and this belief is upheld by a recent opinion of the Attorney-General of California. We call to your attention the situation in Kern County at the present time in so far as care of the patient who can partly pay his own way is concerned.

"It is now and always has been the concern of this group to properly care for all classes of people. It has been ad-

mittedly difficult at times to care for those patients who can pay part but not all of their care.

"The medical profession believes that a great many of these people, at least, can be cared for in the county hospital, and it is felt that the time has arrived when the supervisors and the medical profession can get together on a feasible plan."

The board will ask five members of the association to meet with the five supervisors at a time and place to be announced by the chairman. . . .—Bakersfield *Californian*, September 19.

LETTERS

Subject: A physician nominated for Lieutenant-Governor of California.

To the Editor:—In times past I have noted that in its columns your JOURNAL called attention to the far greater interest which medical men of other countries than America have displayed in civic offices and duty, and you expressed the thought that one of the reasons for the passage of some of the obnoxious laws having a bearing on public health was the absence of medical men in legislative bodies. You expressed the hope that members of the medical profession might well take a more direct interest in such matters, and even permit their names to be considered for legislative positions.

It is a pleasure, therefore, to be able to call to the attention of the California medical profession that the successful candidate for the very important office of Lieutenant-Governor of California is Walter Scott Franklin, M.D., for some years professor of ophthalmology in the Medical School of the University of California, now retired from practice and a rancher in Santa Barbara County.

Doctor Franklin is well known to members of the medical profession throughout the state and, in the writer's opinion, would perform well the duties of Lieutenant-Governor, with credit to himself and to the profession of which he is a member. I hope physicians everywhere will mention his name to patients and friends.

Respectfully submitted,
HENRY S. ROGERS.

Subject: Correspondence. I. A letter to Mrs. Roosevelt. II. A reply through Assistant Surgeon-General Waller. III. A reference to the California Medical Association. IV. A letter from the C. M. A. Association Secretary.

* * *

I

(COPY)

Oroville, California,
August 20, 1938.

Dear Mrs. Roosevelt:

Please forgive me for taking this liberty of writing you, but being my aim is to help a dear soul, won't you please read through this letter.

I have a sister at Los Angeles who is sick and destitute. She came there three months ago from Arizona to take treatments from a doctor whom she has a lot of faith in. She has taken a few treatments and has improved a great deal, but being as she has run out of money, is unable to keep on with these treatments. Her husband is with her, and been trying his best to get employment but has been unable to get any, and being their non-residents he's not eligible for PWA work, so they really are in very bad circumstances.

I would love to help her if I could, but am unable to do so. We've had sickness and doctor bills lately, and my husband is unemployed.

I wonder if you wouldn't please help her. I know you are a kind person, and no one could possibly appreciate it more than her. She's a Christian, so I know she would take it as an answer to prayers and a gift from God.

My sister is a dear sweet person, so kind and patient. She has been sick for several years. Her trouble is stomach trouble, and rheumatism, but this doctor says he can cure her. He is very reasonable in price. She's thirty-eight year's old, so it would be too bad if she couldn't get over this ailment and would have to go through the rest of her days in this condition. She has a darling boy of five, who is so good for his age and loves his mother so much. His name is Arnold.

I think we have a very good President and I do hope he will run again, as I feel certain he will be elected. Conditions sure would be worse if we didn't have such a good loyal person in office.

Dear Mrs. Roosevelt, won't you please help my sister. She don't know anything about me writing you, so it would sure be a surprise to her if you would be so kind as to send her something and I never could thank you enough. I will give you her address: Mrs. ———, ——— Street, Los Angeles, California.

Love and best wishes to you, I am

Mrs. ————,
————, California.

* * *

II

(COPY)

September 7, 1938.

Mrs. ————
————, California
Dear ————:

Acknowledgment is made of your recent letter, addressed to Mrs. Roosevelt, stating that your sister is in need of medical treatment, but that she is without the financial means to pay for it.

Although there has been considerable publicity on the subject of medical care in press reports on the National Health Conference, no legislation has as yet been passed which would permit the Federal Government to extend free medical or hospital care to the public at large. This case, therefore, is one for the attention of state or local authorities or agencies. Accordingly, a copy of your letter is being referred to your State Health Officer, Dr. Walter M. Dickie, at San Francisco, California, and to the medical society of your state. It is hoped that one or the other of these agencies will be able to furnish the necessary aid or treatment.

By direction of the Surgeon-General.

Respectfully,
C. E. WALLER,
Assistant Surgeon-General
Domestic Quarantine Division.

* * *

III

(COPY)

TREASURY DEPARTMENT
PUBLIC HEALTH SERVICE
WASHINGTON

September 6, 1938.

Letter from: Mrs. ———, ———, California.
Dated: August 25, 1938.
Subject: Desires help for her sister, Mrs. ———, Los Angeles, California. Sister is ill and destitute.
Respectfully referred to: California Medical Association, 450 Sutter Street, San Francisco, California.
By direction of the Surgeon-General.
cc Dr. W. M. Dickie
State Health Officer

C. E. WALLER,
Assistant Surgeon-General
Domestic Quarantine Division.

* * *

IV

(COPY)

CALIFORNIA MEDICAL ASSOCIATION

San Francisco, September 13, 1938.

Mrs. ————
———, California
My dear Mrs. ———:

Copy of your letter of August 20th to President Roosevelt's wife and copy of reply of September 7 by C. E.

Waller, Assistant Surgeon-General, has been received by the California Medical Association.

I note the address of your sister, Mrs. ——— is ——— Street, Los Angeles, California, and that you write that a physician who states he can cure her has told her she has stomach trouble and rheumatism.

I note that Assistant Surgeon-General Waller, in his letter of September 7th states: "Accordingly a copy of your letter is being referred to your State Health Officer, Dr. Walter M. Dickie, of California, and to the Medical Society of your State. It is hoped that one of these services may be able to furnish the necessary aid or treatment."

For your information, I may add that the California Medical Association has no facilities for furnishing surgical or medical care to citizens of California. Also that the State Board of Public Health is probably in the same position, because its function is to prevent rather than to treat disease.

If your sister and her husband are in destitute circumstances it would be proper for one or the other to apply to the Bureau of Outdoor Relief of the County of Los Angeles or to the Los Angeles Community Chest organization. I am sending a copy of this letter to the Los Angeles County Medical Association, 1925 Wilshire Boulevard, for the information of that organization.

You state that you have been in Los Angeles only three months. The California law makes it impossible to admit patients to its county hospitals unless there has been at least one or two years' prior residence. Of course, emergency aid is given for acute illness or injuries.

Yours very truly,

GEORGE H. KRESS, M.D.,
Secretary.

Subject: Tenth International Congress of Military Medicine and Pharmacy, Washington.

To the Editor:—Enclosed herewith is a copy of the tentative program of the Tenth International Congress of Military Medicine and Pharmacy, including a suggested notice. This notice was published in the International Bulletin of the Congress, which is printed at Liège, Belgium. The Organizing Committee of the Tenth Congress would very much appreciate a notice in your journal relative to the next meeting of the Congress in Washington, D. C., May 7 to 15, 1939. . . .

Registration is without fee, and blanks will be sent to all persons who are interested on application to the Secretary General. Thanking you for your coöperation in this matter, believe me, my dear sir,

Very sincerely yours,

HAROLD W. JONES,
Colonel, Medical Corps, U. S. A.

P. S.—Address all communications to the Secretary General, Army Medical Library, Seventh Street and Independence Avenue, Southwest, Washington, D. C.

* * *

The forthcoming International Congress (tenth) of Military Medicine and Pharmacy will be held in Washington May 7 to 15, 1939. Invitations to participate have been sent to every country by the President of the United States, and already acceptances have been received from several countries. A full scientific and social program has been arranged and will shortly be mailed to all the countries to which invitations were sent. A large registration is hoped for and every effort will be made by the committee in charge to make the Congress an attractive one to those participating. General Charles R. Reynolds, the Surgeon-General of the United States Army, will be the president of the Congress. Registration is open to all officers of the medical services of the Army, Navy, Air, and Colonial services, National Guard, territorial forces and public health service, whether active or reserve.

Colonel Harold W. Jones of the Army Medical Corps is Secretary General. The secretarial office is at the Army Medical Library, Washington, D. C.

SCIENTIFIC PROGRAM

First Question.—The Organization and Function of the Medical Services in Colonial Expeditions.
Reporters: Italy and the United States of America.
Second Question.—Probable Casualties in War and Methods of Calculation.
Reporters: Germany and the United States of America.
Third Question.—Practical Procedures for Anesthesia and Analgesia in War Surgery.
Reporters: Brazil and the United States of America.
Fourth Question.—Organization and Function of the Military Chemico-Pharmaceutical Service.
Reporters: Argentina and Czechoslovakia.
Fifth Question.—Emergency Treatment and Primary Apparatus for Fractures of the Jaws in War.
Reporters: England and the United States of America.
Sixth Question.—Technical Specialization of Administrative Officers in the Medical Service.
Reporters: Mexico and the United States of America.
Seventh Question.—Oxygen Therapy and Its Practical Use with Troops on Active Service.
Reporters: Belgium and the United States of America.

Subject: Postgraduate Course of the San Joaquin County Medical Society.

(COPY)

SAN JOAQUIN COUNTY MEDICAL SOCIETY
Committee on Postgraduate Activities
C. A. Broaddus, Chairman
A. L. Van Meter
Samuel Hanson
C. V. Thompson
W. H. L. Collis
J. O. Eccleston

Stockton, California,
September 1, 1938.

To the Editor:—We enclose herewith a prospectus for the Fourth Annual Graduate Study Series to be held in Stockton this fall under the auspices of the San Joaquin County Medical Society. We believe you will find this bigger and better than ever before.

Through the courtesy of Dr. William Friedberger of the San Joaquin General Hospital we are able to offer four clinics during the course—two surgical and two medical. This is a mighty fine addition to our usual program, and we are very grateful to the Doctor for his fine coöperation.

In order to meet the expenses of the course the usual fee of $5 will be charged, which entitles the registrants to all the privileges of the lectures and clinics, both in Stockton and at the San Joaquin General Hospital in French Camp.

Very truly yours,

(Signed): THE COMMITTEE ON POSTGRADUATE ACTIVITIES.

* * *

PROGRAM OF THE FOURTH ANNUAL GRADUATE SERIES
SAN JOAQUIN COUNTY MEDICAL SOCIETY
STOCKTON, CALIFORNIA
SEPTEMBER, OCTOBER, AND NOVEMBER, 1938

Thursday, September 22, 8:00 p. m.
Clubrooms, Medico-Dental Building
Dr. A. L. Van Meter, Chairman

Electrocardiography: Its Interpretation and Its Application in Relation to Treatment, Dr. William Dock and Associate.

Electrocardiography will be discussed by Doctor Dock and his associate. Liberal time will be allowed for answering questions, and an hour will be devoted to a review of the newer treatment of the common types of cardiac disease.

* * *

Thursday, September 29, 8:00 p. m.
Clubrooms, Medico-Dental Building
Dr. A. L. Van Meter, Chairman

Metabolic Disturbances as Seen in Hyperthyroidism, Myxedema, Calcium Disturbance, Addison's Disease, Cushing's Disease, Dr. Hans Lisser.

No comment is necessary when Doctor Lisser is the speaker. Those of you who have heard him previously

will appreciate the interesting evening in store for you. Those of you who are to hear him for the first time will be delighted with his presentation.

* * *

Saturday, October 1

San Joaquin General Hospital, French Camp

Dr. Samuel Hanson, Chairman

Surgical Clinic.

Proctology.

Consisting of a diagnostic and operative clinic on rectal diseases.

Dr. James W. Morgan, University of California.

One major and several minor rectal operations will be demonstrated, dependent upon the material at hand. Free discussion of diagnosis and treatment during operations as well in a special period devoted to that purpose afterward. Hemorrhoids and anal fistula will be given special attention.

* * *

Saturday, October 8,

San Joaquin General Hospital, French Camp

Dr. Samuel Hanson, Chairman

Surgical Clinic.

Thoracoplastic Operations, Dr. Paul K. Samson and Dr. Elliot P. Smart.

Special attention will be given to the diagnostic points indicating the need for operative measures in tubercular chest conditions.

* * *

Thursday, October 20, 8:00 p. m.

San Joaquin General Hospital, French Camp

Dr. J. W. Barnes, Chairman

Medical Clinic.

A Clinical Presentation of Medical Cases, Dr. W. J. Kerr, San Francisco.

The type of cases will be governed by the material available in the hospital at the time.

* * *

Thursday, November 17, 8:00 p. m.

San Joaquin General Hospital, French Camp

Dr. J. W. Barnes, Chairman

Medical Clinic.

A Clinical Presentation of Medical Cases.

Visiting speaker from out of the State (to be announced later).

Subject: Certain advertised "vitality" products.

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF PUBLIC HEALTH

September 21, 1938.

To the Editor:—I am enclosing herewith copies of correspondence for your information.

Sincerely yours,
J. C. GEIGER, M.D.,
Director of Public Health.

* * *

(COPY)

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF PUBLIC HEALTH

September 10, 1938.

[Name of firm addressed]

Dear Sir:

It has come to my notice from several sources that there is a nationally advertised product purporting to contain all the necessary substances for vitality and which is being offered for sale through department stores.

Without attempting to pass on the possible value of this product with relation to its vital content, I wish to go on record, as Director of Public Health, against this form of the practice of medicine by commercial concerns. The incomplete scientific knowledge available at this time on the possible effects of the consumption of vitamins over an indefinite period of time fully justifies the attitude that caution should be observed in the use of such products. There is considerable question of what constitutes the proper dosage of vitamins in the various age groups.

An attempt to commercialize the sale of a product containing substances whose value to the general public health is still controversial is indeed ill-advised. Even if it is granted that the actual danger from the consumption of these products is relatively small there is as yet no definite information on the limits of safety. Vitamins are definitely in the class of medications and under that circumstance should be under the administration of a physician who has an opportunity to observe the progress of his patient rather than to be in the hands of a commercial distributor whose sole interest is the sale of his manufactured product and who may promise things that can't be delivered.

Sincerely yours,
J. C. GEIGER, M.D.,
Director of Public Health.

* * *

(COPY)

[Name of Firm addressed]

September 16, 1938.

Dr. J. C. Geiger,
Director of Public Health,
Department of Public Health,
101 Grove Street,
San Francisco, California.

Dear Doctor Geiger:

I am enclosing a copy of a letter purported to have been written and signed by you that has just been received by me from my customer, ——— Company in San Francisco.

Although you carefully name no names, my customer feels that your letter is, in some way, connected with [name of product]. As we both know, there are scores of products on the market all of which are in one way or another sold through department stores throughout the whole United States. I am returning this entire correspondence to [name of company] with the statement that I am sure that no man in your position would write such a letter as this about [name of product]. There must be some mistake.

Surely, a well-informed medical man of your high office knows that [name of product] is a biologically standardized product which supplies only those vitamins already thoroughly explored, which makes none but thoroughly credited, accepted claims on or within the package, and that the product is regularly sold by duly accredited and registered pharmacists under a specific ruling of the California State Board of Pharmacy. Consequently, I am writing my friends the [name of company] that there must be some mistake. We are sure that you cannot be referring to [name of product].

We would appreciate an acknowledgment of this letter.

Respectfully,
(Signed) : HENRY B. SELL,
President.

* * *

(COPY)

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF PUBLIC HEALTH

September 21, 1938.

My dear Mr. [name of firm]

In reply to your communication concerning vitamin products on the market, I am enclosing a copy of an executive order issued in 1934 concerning vitamin D milk. This represents the attitude of this department today just as it did four years ago.

I also wish to call your attention to the following action taken by the French Government:

"In December, 1936, the Academy of Medicine, in considering the question of the increase of the vitamin content of certain foodstuffs (milk in all its forms, flour, pastes, sugar, chocolate, etc.), pointed out that, while products thus treated are capable of having a useful action under certain circumstances, they are also capable of producing serious troubles, even death. Foods which have undergone special treatment with a view of giving them therapeutic properties must be considered as actual medicaments."

The administration of powerful medicaments should be under the constant supervision of a physician.

Sincerely yours,
J. C. GEIGER, M.D.,
Director of Public Health.

MEDICAL JURISPRUDENCE †

By HARTLEY F. PEART, ESQ.
San Francisco

Blood Grouping Tests as Evidence of Non-Parentage

In *Arais* vs. *Kalensnikoff*, 95 Cal. Dec. 4, the facts were as follows:

Plaintiff, who was separated from her husband, commenced action to secure a judicial determination that defendant was the father of her illegitimate child. Plaintiff claimed that she had not had sexual intercourse with anyone other than defendant for some time and that she had frequently had relations with him. The defendant denied that he had ever had intercourse with plaintiff at any time. The trial court, with plaintiffs's consent, ordered that a Landsteiner blood test be made. The court appointed a reputable physician who administered the test and concluded that the child could not possibly be the offspring of the defendant if the plaintiff were the child's mother.

The trial court, in spite of the findings resulting from the Landsteiner blood grouping test, held that the defendant was the father of plaintiff's child. The case was first appealed to the District Court of Appeal and that court reversed the trial court on the ground that the blood grouping test constituted conclusive and unanswerable evidence of non-parentage. A hearing was then granted by the Supreme court which, after further argument by counsel, reversed the District Court of Appeal and affirmed the judgment of the trial court. The Supreme Court specifically held that findings based upon the Landsteiner blood grouping test do not constitute conclusive evidence of non-parentage, but only rebuttable evidence, *i. e.*, evidence that may be offset by contradictory testimony and believed or not believed by the trial court or the jury.

The opinion of the Supreme Court stated that under Code of Civil Procedure, Sec. 1978, no evidence is by law made conclusive or unanswerable unless so declared by some express provision of the Code of Civil Procedure, and that there was no section in the Code of Civil Procedure making blood grouping tests conclusive evidence of non-parentage. The court further held that blood grouping tests had not as yet attained sufficient certainty to be brought within the doctrine of judicial notice. That is to say, the court was of the opinion that findings resulting from blood grouping tests could not be accepted by the courts as an uncontrovertible scientific truth. In this connection the court pointed out that blood grouping tests cannot be used affirmatively to prove that a certain person is the parent of a particular child.

In most European countries courts have held that if the results of a blood grouping test indicate that paternity is impossible, such results are conclusive and beyond dispute by the parties. (See Note, 26 Cal. Law Review 456). Some jurisdictions in the United States follow the European view, for example, New York and Pennsylvania. California is apparently the first jurisdiction to refuse to consider the results of a blood grouping test to be conclusive evidence of non-parentage and to allow the testimony of witnesses to be received in evidence in contradiction thereof. A commentator in the California Law Review remarks that:

> While the case is one of first impression, it is contrary to the general trend of decisions, both concerning the blood group test in particular and scientific evidence in general.

The use of the Landsteiner blood grouping test for the purpose of proving non-parentage focuses attention upon one of the most perplexing problems confronting judges; that is, when is it safe to accept a scientific theory as an uncontrovertible fact. The rules of law are clear enough, *viz.*, that the laws of nature, the measure of time, geographic divisions, political history of the world and certain additional scientific or physical facts which have been proven beyond any doubt, are not matters subject to conflicting testimony, but, the difficulty arises when a new scientific development is offered as an uncontrovertible fact and is claimed to be entiled to take its place within the foregoing list. Judges as a whole are inclined to be very slow to accept any new subject of knowledge as conclusive and this hesitation accounts for the difference of opinion amongst courts with respect to the conclusiveness of the Landsteiner blood grouping test.

Inasmuch as all competent scientific authorities apparently assent to the proposition that the Landsteiner blood grouping test is wholly reliable and can prove beyond question that particular persons are *not* the parents of a particular child, it is seemingly quite unfortunate that judicial conservatism has prevented the acceptance of the scientific point of view by the law. It is the general rule in California that a finding of fact based solely upon the testimony of witnesses which controverts physical facts or which is based upon scientifically impossible testimony will be set aside on appeal as not supported by substantial evidence. The foregoing rule would seem to be applicable to the case under discussion. Yet, on the other hand, it must be conceded that the ends of justice are better served in the long run by caution in the acceptance of new scientific facts as conclusive than by overenthusiastic acceptance of new theories which may contain hidden flaws at the time undiscovered.

† Editor's Note.—This department of CALIFORNIA AND WESTERN MEDICINE, presenting copy submitted by Hartley F. Peart, Esq., will contain excerpts from and syllabi of recent decisions and analyses of legal points and procedures of interest to the profession.

SPECIAL ARTICLES

PROPOSED CALIFORNIA HUMANE POUND ACT IS REALLY AIMED AT STOPPING MEDICAL RESEARCH

The Society of American Bacteriologists, meeting in San Francisco, passed a resolution admittedly aimed at the miscalled "Humane Pound Act," now on the California ballot [for decision on November 8, 1938], warning against misguided efforts, "by direct and indirect means," to cut off the supply of animals needed for scientific research and for the preparation of biological products. Such activities, the resolution declared, "should be opposed by all enlightened members of the community."

Similar action will, of course, be taken by other scientific bodies, and, as on former occasions, by the authorities of the principal universities. These are, obviously, not merely "enlightened members of the community," but are, on this subject, precisely its best informed members, since they are the only ones who have made it their life work, and know, first hand, in detail, what goes on in the laboratories which —instead of the pounds—are the real objectives of this measure.

On this subject, they might be liars, as the "antivivisection" crusaders charge, but they cannot be ignorant. And they say that the horror tales of the antivivisection literature are fictions or distortions.

These authorities, furthermore, are not inhumane persons, and are not regarded as untrustworthy in the other relations of life. If the real purpose of the "Humane Pound Act" were to make pounds humane, and if it would accomplish this, they would be for it. And if the "cruelties" charged against their laboratories actually existed, they would be the first to take steps against them.

If these scientific men, on a matter on which they have first-hand acquaintance with all the facts, are falsifying the truth for pay, to promote the nefarious profits of fraudulent serum vendors, that is a far worse evil than the "cruelties" they are alleged to perpetrate or condone. For these include the men to whom we intrust the university training of the youth who are to guide the oncoming generation. To corrupt the minds and characters of a whole generation by subjecting its selected best to the formative influence of men of this degree of dishonor would be a worse menace to "humane" progress than the slaughter of all the stray dogs, guinea pigs, white rats and fruit flies in America.

If the responsible heads of our universities were this sort of men, the sooner we closed their institutions the safer we would be.

Furthermore, these very bacteriologists who passed this resolution are the leaders of the profession to which we entrust the protection of the public health. We drink our

water and milk unafraid, because they guard against its contamination by the germs of filth and disease. To their researches we owe the banishment of yellow fever and cholera and the virtual elimination of typhoid and diphtheria.

And the physicians, all of whom have worked in these laboratories, and who also deny the "cruelty" tales, are the very persons to whom we entrust our lives and our secrets when we are ill, and on whose advice we rely to avoid illness. They stand next to the confessional in the confidences they receive—and keep. If they, knowing what happens in these laboratories, would solemnly deny the truth, for pay, we should withdraw our confidence in them for all other purposes.

Ask your own doctor, whom you trust in everything else, if these tales are true.

This "Humane Pound Act," to be sure, does not directly prohibit animal experimentation, and there are a few of its advocates who support it from considerations of pound administration. For their purposes, however, the act is superfluous, since those purposes can be—and largely are—accomplished by other means. But any contact with the main mass of its proponents reveals that their purpose is to handicap the laboratories now, because they object to animal experimentation, with the view of prohibiting it later. Some of them are moved because they believe the tales of "cruelty." But the majority are opposed to medical experimentation because they are opposed to medical science. If they are right, this scientific age should adjourn.—Chester Rowell, in the San Francisco *Chronicle,* September 6.

THE USES OF ANIMAL EXPERIMENTATION

The conservative attitude of the medical profession has both good and bad aspects—good when it refuses the use of untried drugs and unproved methods of therapy, bad when it permits medical progress to be attacked and maligned without defending itself. This attitude permits the public to be deceived concerning medical progress and sometimes causes the sick to seek relief from undependable sources which promise help. *The Journal,* by its continual exposure of "quack" medicines and falsely claimed "cures," has for many years done a great service to the public as a whole. More difficult to combat than such deliberately fraudulent claims, however, is the destructive work of the small but vociferous group opposed to experiments on animals. Their "crusaders" each year spend large sums of money in an attempt to stop all experimental work in the biologic sciences. In spite of the proved facts concerning the whole science of bacteriology, learned almost entirely through animal investigation, they claim that no good has come through man's utilization of animals in laboratory study.

The antivivisectionists refuse to recognize the great and continuous fall of the death rate in the infectious diseases, the remarkable extension of life since the discovery of bacteriology and the beneficent progress of modern surgery as related to animal investigation. True, if their children acquire diphtheria they may use antitoxin, and if they develop appendicitis they may seek out a surgeon, but the relation of these therapeutic agents to research on animals is disclaimed. With these people argument and elucidation of the facts serve little purpose, for they twist the truth, misquote medical men now dead, and play on sentiment, not reason.

At present opponents of experiments on animals are proposing and advocating the so-called Humane Dog Pound Initiative in California, which will be voted on by a referendum in November. This cleverly constructed piece of legislation is apparently aimed against unnecessary suffering of dogs; actually it will make further animal investigation in the State of California difficult and hopelessly expensive. Such legislation, if passed, will seriously hamper further laboratory investigation in every state. Proper education of the public in (1) the methods of animal investigation and (2) the advantages that have accrued to the people from animal investigation should do much to bring about its defeat.

The articles now appearing in the *Country Gentleman* written by Paul de Kruif are a splendid assistance in this important task. In these articles de Kruif has exposed not only how much man has benefited, but how much the animals themselves have benefited from laboratory investigation. The tremendous decrease in Texas fever of cattle, hog cholera, bovine tuberculosis and foot and mouth disease are striking examples of how the use of a few animals in laboratory investigation has lessened or completely done away with the suffering of hundreds of thousands of animals. De Kruif has sharply emphasized this advantage by stating the tremendous financial saving to our farmers. Naturally, man cannot control human disease as completely as animal disease. The article in the September issue of the *Country Gentleman* depicts the possibilities for comfort and longevity which may follow the acquisition of exact knowledge through animal investigation. In succeeding issues the advantages which have accrued to man through similar animal experimentation will be made public.

This service to the continuance of medical research deserves recognition by the medical profession. Every physician may aid by calling the attention of patients and friends to these masterful statements.—*Journal of the American Medical Association,* September 10, 1938.

MEDICINE AT CROSSROADS

The whole question of assuring the American people of adequate medical care, which was discussed at length at the recent Washington conference, has suddenly been focused on one point by the action of Assistant Attorney-General Thuman Arnold in formally accusing the American Medical Association and the District of Columbia Medical Society of violating the federal antitrust laws. It is safe to predict that the settlement of the case will probably influence the methods of the practice of medicine in the United States for years to come.

The facts, at least as Mr. Arnold presents them, are simple. The Group Health Association, Inc., was voluntarily organized a year ago by 2,500 small-salaried government employees to provide themselves with medical care for a small monthly fee. When the association attempted to retain competent physicians, it found that the District of Columbia Medical Society had threatened to expel any of its members who might enter into an agreement with the association. It also discovered that the society had forbidden its specialist members to consult with physicians employed by the association, and that it had prevailed on several Washington hospitals to refuse admittance to the association's doctors. It is well known, as Mr. Arnold says, that the Washington episode is not unique, and that the medical societies have similarly opposed the organization of group medicine association and hospital insurance plans in several other cities.

If these ventures will inevitably lower the quality of medical care, and the American Medical Association can demonstrate that certainty, it is on strong ground. Plainly we must not embark on any scheme which will impair existing medical standards. But if the American Medical Association's objective is merely to freeze out present medical facilities into a state of permanence and to prevent the free and honest trial of new facilities, it is on exceedingly weak ground.

As it has been declared many times in recent years and as it now must be apparent to almost everybody, the very rich and the very poor today receive the best medical treatment. The rich can afford to engage the best physicians and surgeons. The poor can obtain free treatment—often from the same doctors—at a hospital or clinic. But the middle class, the people with incomes of from $1,000 to $2,500 a year, usually have great difficulty and frequently suffer real hardships in attempting to meet the cost of a serious illness. The group scheme offers them the opportunity of buying protection against the financial impositions of illness just as most of them now insure themselves against the loss of their homes by fire—through small monthly or yearly payments.

In reply to the antitrust charges, the American Medical Association has immediately revived the bogey of government regimentation and "socialized medicine." The essential point is that these voluntary, coöperative organizations —which nobody has to join unless he wants to—really promise to obviate the need of government subsidy and regulation.

Public funds and private charity already take care of the poor sick. Our present objective should be to forestall the necessity of caring for the middle class sick in the same way. Certainly from the taxpayers' standpoint it is much more desirable to encourage 2,500 government employees in Washington—or any other group of citizens—to finance their own medical care through a coöperative arrangement than to deny them that right and invite them to seek public or private assistance whenever they fall ill.

Mr. Arnold was careful to state in his opinion that he is not accusing the members of the medical societies of a moral offense. Indeed, he invited them as "persons of distinction and good will" to coöperate in ending the impasse "so that there may be free and fair competition between the forms of organization and the older types of practice." It is to be hoped that the American Medical Association's Chicago office will dismount from its high horse and join with the humble laity in a search for the just and intelligent course. —*The Boston Herald,* reprinted in the *Ontario Report,* August 22.

THE ENGLISH ABORTION TRIAL*

In April, 1938, a girl of fourteen was assaulted in England by several troopers of the Royal Horse Guards, and as the result of the assault she became pregnant. The organizer of the School Care Committee brought the girl to the attention of Dr. Joan Malleson, a well-known woman physican in London. It was Doctor Malleson's opinion that in view of the circumstances the pregnancy should be terminated, and she sent a letter to Dr. Aleck W. Bourne, one of the most distinguished British gynecologists, with the suggestion that someone of his standing should undertake the operation, preferably in a public hospital. Doctor Bourne, who is obstetric surgeon at St. Mary's Hospital and consulting obstetric surgeon at Queen Charlotte's Hospital, replied that he would be glad to admit the patient to St. Mary's Hospital and perform the operation. The girl was sent to Doctor Bourne and he had her admitted to the hospital, and after a week of observation curetted her on June 14. He then notified the police of his act and invited them to take whatever action they deemed proper under the circumstances. The Attorney-General considered the operation to be unlawful and accordingly brought Doctor Bourne to trial.

The English law on abortion had never been completely clarified before. A statute passed in 1861 forbade "the unlawful use of an instrument for the purpose of procuring a miscarriage." No definition, however, of what was lawful or unlawful was contained in that statute. An additional statute, the Infant Life Preservation Act, passed in 1929, reads as follows:

> Any person who with intent to destroy the life of a child capable of being born alive or by any wilful act causes a child to die before it has an existence independent of its mother shall be guilty of a felony, to wit, child destruction.
>
> No person shall be found guilty of an offense under this section unless it is proved that the act which caused the death of the child was not done in good faith for the purpose only of preserving the life of the mother.

Although this Act was seemingly intended to apply only to cases where the child is destroyed at the time of birth, it has been taken to apply also to ordinary cases of abortion, and has been interpreted to mean that an abortion may be performed "for the purpose only of preserving the life of the mother."

The trial took place on July 18 and 19, 1938, at Old Bailey before Mr. Justice Macnaghten and aroused wide interest in legal and medical circles. Doctor Bourne was charged with "unlawfully using an instrument with intent to procure the miscarriage" of the girl, the word "unlawful" having been inserted in the complaint at the suggestion and insistence of Mr. Ronald Oliver, the attorney for the physician. During his testimony Doctor Bourne stated that the question of when the termination of a pregnancy was justified was a constant problem with all who practiced gynecology. In October, 1935, he related, he had operated in a similar case. At that time the house surgeon declined to assist him when he learned the nature of the operation, and walked out of the operating room. "The refusal of my house surgeon to assist me led me to think very hard on this matter, and I decided on the next occasion to obtain a ruling of the court. That is why we are here." His interpretation of the law, Doctor Bourne said, based on everyday practice of men of repute in the medical profession, was that it was justifiable to perform the operation where there was danger to health. "I cannot draw a line between danger to life and danger to health," he said. "If we wait for danger to life the woman is past assistance." In this particular case he felt that although there was no immediate danger to the life of the patient from the pregnancy, the mental injury would last a very long time and she would suffer from nervous, psychoneurotic and other troubles, with their secondary physical illnesses, perhaps all her life. It was in order to avoid these results that he had decided to operate. He thought that 99 per cent of his colleagues would agree with him under such circumstances.

Three experts were called by the defense: Dr. John Rawlings Rees, a consulting psychiatrist; Dr. William Gilliatt, an examiner in midwifery and diseases of women for Cambridge and London Universities; and Lord Horder, the physician to the King. These men gave testimony in favor of Doctor Bourne, and stated that under the conditions described they would have advised the termination of the pregnancy.

In his summary, Mr. Oliver, the attorney for the defense, pointed out that Doctor Bourne had undertaken this operation for purely humanitarian reasons and without any compensation. "His attitude," said Mr. Oliver, "is: 'What I have done is lawful, is right, is honest and I have not committed an offense.' It was done to get the law declared so that there should no longer be this controversy among the public and in the medical profession as to what a doctor is allowed to do and what he is not allowed to do." He asked the jury to take a wide and liberal view of the meaning of the phrase "preservation of the life of the mother." The mental health of this girl, he said, was likely to be gravely prejudiced for the rest of her life, and upon her mental and physical health her life ultimately depended.

The Attorney-General, Sir Donald Somervell, insisted, in turn, that a distinction should be made between the preservation of health and the preservation of life, and that in this case the abortion was performed not "for the purpose only to preserve life."

In his summary to the jury, Mr. Justice Macnaghten pointed out that this case differed from the ordinary type of abortion case that came before the court. Doctor Bourne, he said, "a man of the highest skill, openly performed the operation in one of the great hospitals. He performed it as an act of charity, believing that he was doing the right thing, and that in the performance of his duty as a medical man devoted to the alleviation of human suffering he ought to do it." The justice urged the jury to take a *reasonable* view of the words 'preservation of the life of the mother.' "I do not think," he said, "that it is contended that these words mean merely for the preservation of the life of the mother from instant death. . . . All life depends on health and it may be that health is so gravely impaired that death results."

"If you think," he continued, "that the Crown have satisfied you beyond all real doubt that Doctor Bourne did not do this act in good faith for the purpose of preserving the life of the girl, then he is guilty of the offense with which he is charged. If the Crown have failed to satisfy you of that, then by the law of England he is entitled to a verdict of acquittal. The case is a grave one and raises matter of grave concern both to the medical profession and to the public."

The jury, which included two women, retired for forty minutes, and returned a unanimous verdict of "Not Guilty." Doctor Bourne was then discharged.

The trial had aroused widespread interest and the court was crowded with "London's most fashionable physicans and social lights." When the verdict was announced it was received with loud applause. It clearly was a popular verdict in England, and the acquittal of Doctor Bourne is considered a most important event in English medico-legal history.—*Journal of Contraception,* September, 1938.

* A summary of the recent trial of Dr. Aleck W. Bourne.

LONGEVITY OF THE AMERICAN PEOPLE

The women in our population live on an average about four years longer than men. This observation is based upon a life table for the general population in the United States for 1935, and it remains true according to a life table just completed for 1936, although for each sex separately there has been a slight recession. According to the figures for 1936, the average length of life for white males is 60.18 years and that for white females 64.36 years, as against corresponding figures of 60.72 years and 64.72 years in 1935. These facts are gathered from life tables for the general population of the United States computed in the Statistical Bureau of the Metropolitan Life Insurance Company, which are shown in abridge form in Table 1 separately for total persons (white and colored) and for white persons by sex. Data relating to longevity since 1901 will be found in Table 2.

The last three columns of Table 1 show the mortality rates upon which the expectations of life are based. When comparison is made of the mortality of white males with that of white females, it is found that the advantage of the latter is not uniform through all ages of life. At birth, mortality among males is 28 per cent in excess of that among females; at age 3 the differential is only 11 per cent. At age 50 the excess for males is 48 per cent, but with advancing age the death rates of the two sexes tend to become more nearly equal.

On the basis of total persons, regardless of color or sex, it wll be seen in Table 1 that the expectation of life, which starts with 60.81 years at birth, rises to a maximum of 63.13 years at age one. A half-century of life is still remaining to those who reach age 16. By the time age 34 is reached, the average person has as many years before him as behind him, and at age 46 the average citizen may still look forward to a quarter-century of life. Even for those who have attained the proverbial three score and ten, there still remain, on an average, nine and one-fourth years.

Although the average length of life for the general population in the United States during 1936 (60.81 years) fell by about one-half year below the record for longevity established in 1935, when a level of 61.37 years was reached, the slight recession is in no sense a cause for alarm. The general level of longevity for a number of years has been very high, and the figure for 1936 marks a gain of practically one and one-quarter years since 1930, the year of the last census. Compared with an average length of life of 49.24 years in 1901, the year for which the first official life table was published, the average length of life in 1936 establishes an improvement of 11.57 years in a period of thirty-five years. It will be observed from the data in Table 2 that the improvement in longevity among white females since the turn of the century has been greater than that among white males. Thus the average length of life for white females in 1936, namely, 64.36 years, shows a gain of 13.28 years as compared with that in 1901, namely, 51.08 years. In the case of males the figure for 1936, namely, 60.18 years, represents a gain of 11.95 years over that for 1901.

TABLE 1.—*Expectation of Life and Mortality Rate Per 1,000 at Specified Ages for Total Persons (White and Colored) and for White Persons by Sex, United States, 1936*

	Expectation of Life, Years			Motality Rate Per 1,000		
Age	Total Persons	White Males	White Females	Total Persons	White Males	White Females
0	60.81	60.18	64.36	52.17	54.66	42.85
1	63.13	62.63	66.22	7.64	7.57	6.45
2	62.61	62.11	65.64	3.88	3.97	3.39
3	61.86	61.35	64.87	2.71	2.70	2.43
4	61.02	60.52	64.02	2.13	2.16	1.93
5	60.15	59.65	63.15	1.79	1.86	1.61
10	55.58	55.11	58.54	1.19	1.31	.98
15	50.95	50.49	53.84	1.86	1.86	1.37
20	46.51	46.02	49.27	2.91	2.68	2.11
25	42.22	41.66	44.82	3.58	3.13	2.69
30	37.97	37.31	40.43	4.07	3.63	3.09
35	33.77	33.02	36.07	5.24	4.87	3.79
40	29.70	28.88	31.77	6.72	6.63	4.70
45	25.73	24.89	27.55	8.82	9.19	6.25
50	21.94	21.12	23.47	12.31	13.17	8.88
55	18.35	17.59	19.57	16.65	18.50	12.49
60	14.96	14.32	15.88	24.31	27.14	19.31
65	11.93	11.40	12.56	37.28	40.94	31.24
70	9.28	8.87	9.67	54.87	59.71	48.37
75	7.00	6.70	7.19	84.88	91.93	78.61
80	5.18	5.00	5.23	126.31	133.75	121.69
85	3.69	3.56	3.68	190.21	196.23	191.04
90	2.60	2.47	2.65	282.69	298.88	283.91

TABLE 2.—*Expectation of Life at Birth Among Total Persons (White and Colored) and Among White Persons by Sex, United States from 1901 to 1936*

Year	Expectation of Life at Birth, Years		
	Total Persons	White Males	White Females
*1936	60.81	60.18	64.36
*1935	61.37	60.72	64.72
*1934	60.79	60.24	64.18
*1933	61.26	60.86	64.40
†1932	61.07	60.69	64.38
†1931	60.26	59.88	63.56
1929-1931	59.57‖	59.31°	62.83°
¶1919-1920	.....	55.33	57.52
‡1910	51.49	50.23	53.62
‡1901	49.24	48.23	51.08

* Total United States.

† United States, excluding Texas.

‡ Original Death Registration States.

‖ This figure relates to 1930 only for the United States, excluding Texas.

¶ Aggregate of twenty-seven states; not computed for total persons.

° United States, excluding Texas and South Dakota.

As is only to be expected, the figures in Table 2 give evidence that we can hardly expect, henceforth, as rapid gains in longevity as were experienced in the most remarkable period of the second and third decades of the present century. While in the first decade, 1901 to 1910, the increase in longevity was two years among while males and 2.54 years among white females, in the next decade, from 1910 to 1920, the remarkable gains of 5.10 and 3.90 years, respectively, were recorded. The ten-year period from 1920 to 1930 witnessed an even more marked improvement in longevity, namely, 3.98 years for white males and 5.31 years for white females. The first six years of the current decade have continued the advance, though at a reduced pace, the gains being less than one year for white males and about one and one-half years for white females. The fact is that in recent years, 1932 to 1936, the average length of life has been almost stationary, fluctuating between 60 and 61 years for white males and between 64 and 65 for white females.

Unless some altogether extraordinary developments should arise, we cannot reasonably expect the average length of life to go on improving indefinitely. The rate of any further advance must almost inevitably slacken as we approach an optimum obtainable under present health and living conditions. That we have not reached this optimum should be obvious when we consider that all the advantages of modern medical science are not yet as widely available as they can be made with proper organization. No doubt medical knowledge will continue to advance, and application will always lag a little behind discovery. It is the task of workers in public health to make the lag as short as possible and to make medical and public health practice as up to date and as nearly in unison with scientific knowledge as possible.—*Statistical Bulletin,* Metropolitan Life Insurance Company.

MEDICAL SOCIETY NOT AMENABLE TO TRUST LAW PROVISIONS

District of Columbia Group Takes Stand Against Action on Curtailment

Washington, September 5.—The Medical Society of the District of Columbia has told the Department of Justice that it does not consider itself amenable to the anti-trust laws, a violation of which had been charged against members of the society by the department in connection with the society's opposition to a hospitalization group.

Assistant Attorney-General Thurman Arnold replied to the society, stating the department's expectation that the medical society would "discontinue coercing qualified persons in the practice of their profession."

Anti-trust proceedings were brought on charges that members of the society were expelling, or threatening to expel, physicians employed by the Group Health Association, Inc., composed mostly of government employees who sought low-cost hospitalization.

George P. Hoover and William E. Leahy, attorneys for the society, wrote the department: "After careful examina-

tion of the law we reached the conclusion that the medical society did not come within the range of the anti-trust laws."

Stating that the society "has not done any act which would make it subject to a charge of having violated the provisions of said laws," the letter added:

"Inasmuch as you entertain different views as to the law, we do not feel that anything constructive may be accomplished by any further discussions."

The lawyers reiterated that they represented only the local medical society, "since it is apparent that your field of inquiry extends far beyond" any of its activities.

In replying, Mr. Arnold said that the attorneys, in attempting to give the substance of a conference between them and members of the department, had made a statement which "may have been inadvertent, but which nevertheless requires explanation in order that no one may be misled as to the policy of this department."

The statement, made by Mr. Hoover, was as follows:

"At the conference with you, you stated that it was not the policy of the Department of Justice to coerce any group for the purpose of having them desist in any course in which they might have been engaged."

"This, of course, is not our position," Mr. Arnold went on. "On the contrary, the principal purpose and the policy of the department in prosecuting violations of the anti-trust laws is to compel the individuals or the group involved to desist from such violations. The purpose of any criminal penalty is its deterrent effect.

"It may be that the statement in your letter was only an error in phraseology. In view, however, of your release to the press, I think it advisable to make it perfectly clear that the department does expect the medical society to discontinue coercing qualified persons in the practice of their profession.

"I wish to make it clear that any further practices of this kind will be prosecuted. The very purpose of our public statement was to serve as a warning of that prosecution policy."—*The Recorder*, San Francisco, September 6.

$10,000 A YEAR MAN HITS DOCTOR'S BILL

New York, August 24.—It is coming on toward the deadline, so there is not enough time today to settle here, for good and all, the issue of socialized medicine. However, there are some letters at hand which will do for fuel for argument, one contending that a doctor is overpaid at $200 for doing an appendectomy and saving a solvent patient's life.

"We could not do without water for a month," says this one, and adds that we would starve for lack of food, proceeding then to challenge, "is a month's supply of water necessarily worth $200? And one who charged a starving man $200 for a single meal—wouldn't he be regarded as devoid of humanity?"

Well, a drink of water has been known to sell high in certain frontier places where water was packed in casks on burros, and in such cases if a man lacked a dollar or whatever the price to pay for a drink the price might as well have been $200 as far as he was concerned.

The same argument goes for the single meal to save a life. Many a man with a thin dime in his pocket has been turned back into the snow because the price of a flop in some fleabag on South Clark or West Madison Street, Chicago, or on the Bowery, New York, was 15 cents.

WHAT'S THE DIFFERENCE?

And there is just no reckoning the number of hungry men who have gazed in at the windows of restaurants, even the dirty spoon joints, too weak and famished to drool, and continued to starve because they couldn't buy a cup of coffee and a roll, much less a meal. In such cases what difference does it make whether the price of a flop or a meal is 15 cents or $200?

Just after prohibition began the Salvation Army placed in charge of one of its down-and-out clubs, one of those great big, clear-eyed, right-thinking, clean-living, muscular Christians of the Y. M. C. A. type, who hated anyone who took a drink and would strut his muscularity and his particular interpretation of Christianity by heaving out all the sick and snaggle-toothed and busted bums who made the mistake of looking for Christian kindness there. He wanted only God-fearing respectables, and he used to boast of the number of his permanent lodgers who had steady jobs, forgetting that his place was nominally a charitable institution and that these deadbeats were able to pay reasonable rates for private quarters, as independent men should be compelled to.

The same deadbeat temperament takes advantage of free or nominal fee medical or surgical service intended for the truly poor, and this abuse has become so raw that in Washington all members of both houses of congress and all members of the cabinet, by a cheap and greedy distortion of an act of congress, are now entitled to such service in the naval hospital practically free.

COULDN'T PAY DOCTOR'S FEE

I doubt that even in frontier desert places any man ever perished for lack of the price of a glass of water, but there are thousands of doctors who give away free the same service that would be unavailable to desperately sick people if they insisted on their full fees. But a little lower specimen of insect lift than the doctors who won't treat the sick poor free is that type of man or woman who can pay a reasonable amount for relief from suffering but imposes on the doctor's circumstances and his charity.

A widow of a doctor residing in Washington writes of a government clerk whose little boy had been carried through a desperate illness and who then said to the doctor, "I know I owe you a bill and I am sorry I can't pay it, but I am buying my house and that keeps me strapped."

A doctor writes, "I spend half my time in charity wards and clinics," and tells of a midnight call to a suicide case which kept him up all night and required daily service for ten days. When the patient got well he sent a bill, and finally sued. But on the very day the court gave judgment for his fee the patient jumped to another state.

RED LIGHT FOR GERMAN MEDICINE

Another doctor says Bismarck gave Germany state medicine fifty years ago and that nothing new in medicine has come out of Germany, formerly a leader in scientific medical investigation, in twenty-five years, while the profession in this country has eradicated malaria, yellow fever, typhoid, diphtheria, and scarlet fever. He says, too, that his British friends say the British panel doctor is less careful, considerate and conscientious than others and that "the recipient of this service would prefer to call other than a panel doctor."

And here is a man charged $200 for an abdominal operation who thinks the doctor robbed him to equalize his service to the poor.

"Why can't I nominate the beneficiaries of my bounty?" he asks. "Or why shouldn't the free patients be told that I, not the doctor, donated the operation?"

A fair suggestion, but listen to him. He gets $10,000 a year, he says, after his income taxes are paid, and he thinks $200 is too much to pay for the saving of his life.—Westbrook Pegler in Sacramento *Union*, August 25.

COURT OUTLAWS MEDICAL PLAN

Supreme Tribunal Rules Socialization for Profit Illegal

San Francisco, September 2 (AP).—A divided State Supreme Court decided today that the Pacific Health Corporation, sponsoring a socialized medicine plan for profit, could not legally operate in California.

Three of the seven judges dissented. At the same time the court approved the coöperative health service system established in San Francisco by charter amendment which would furnish medical care to city employees, teachers, and their dependents for specified compulsory monthly contributions.

DOCTRINE CITED

The so-called socialized medicine cause thus received one knock and one boost from the court at the same time.

Only one judge dissented in the city health service plan case—Douglas L. Edmonds. He also was among the trio who dissented in the Pacific Health Corporation case, writing the dissent himself.

The majority opinion in the Pacific Health Corporation case held "it is an established doctrine that a corporation may not engage in the practice of such professions as law, medicine or dentistry."

SOCIAL ISSUE

It stated, the health corporation, a San Francisco organization, provided medical, hospital and laboratory service to those belonging for specified charges but offered the services only of a certain approved list of doctors.

After commenting that the question of group medical service had become a social issue the majority opinion stated "there can be no true declaration by this court that a change in social viewpoint now requires the abandonment of the rule against corporate practice of medicine."

POSSIBILITY SEEN

"Such a drastic change," the court ruled, "should come from the Legislature after full investigation and debate.

"It is perfectly possible to bring adequate medical service to the vast numbers of people who now can ill afford it by some means which will protect both the profession and the public from the evils of corporate control . . ."

The opinion termed an "illusory apprehension" the argument that the decision would outlaw fraternal, religious, hospital, labor and similar organization health plans. It pointed out one distinction in these plans, namely, that the public was not directly solicited.

CHIEF JUSTICE CONCURS

The Edmonds dissent, concurred in by Chief Justice William H. Waste and Frederick W. Houser, pointed out that "under the Workmen's Compensation Act, insurance companies, through doctors, are daily providing medical service for thousands of injured employees to the apparent satisfaction of all concerned."

In the city health service decision, the court issued a mandate to City Controller Harold J. Boyd of San Francisco to release to the Health Service Board money already collected, at the rate of $2.50 a month, from nearly 12,000 employees and teachers.

BENEFIT SEEN

In this case the court ruled there was "no question of the power of the city to establish a system of medical service for its employees or their dependents." It reasoned that proper medical attention and the knowledge it would be forthcoming, whenever needed, would have a beneficial effect on the health and efficiency of employee.

Judge Edmonds's dissent countered with the theory that the plan had no direct relation to public health or general welfare, and was nothing more than "social health insurance for a restricted group of individuals." He contended that the majority decision would open the way for city employees to form coöperatives for buying groceries, or meeting any other expense."—Los Angeles *Times*, September 3.

MEDICAL SERVICES TAKE 6 PER CENT OF THE FARM FAMILY LIVING BUDGET

Medical services for the farm family represent about 6 per cent of the cost of all goods and services required for farm family living, according to a recent joint report by the Bureau of Agricultural Economics in coöperation with the Agricultural Adjustment Administration and the Bureau of Home Economics.

Cost of medical services for farm families, it was stated, is equivalent to annual expenditure of about $265,000,000 for the United States, or an average of $39 per farm family. Other medical costs, such as medicine, drugs, health and accident insurance, bring the total bill for farm family medical care to about $350,000,000 a year. That's an average per farm family per year of about $51 or 8 per cent of the average farm family budget.

Farm families generally devote about 85 per cent of their total expenditures for living expenses to the purchase of commodities. The other 15 per cent goes for services of various sorts. Of these, medical services are the most important single group.

The report is the first of a series dealing with prices paid by farmers for services and commodities in the years since 1910. Other reports in this series will deal with prices paid by farmers for machinery, building materials, clothing, food, electricity, and other articles. The series is one part of the income parity study to be used by the Department of Agriculture in administering the Agricultural Adjustment Act of 1938. Other parts of the study are farm income, expenses of agricultural production, and income to farmers from nonfarm sources.

YEAR-TO-YEAR CHANGES SMALL

Medical service rates to farmers do not fluctuate greatly from year to year. They increased 21 per cent, however, from the 1910-1914 period to 1924-1929. In the early thirties the economic recession brought some lowering of rates, but from 1932 to 1935-1936 the average of rates for the country as a whole was unchanged at 16 per cent above the 1910-1914 level. On the other hand, it was pointed out that the increase in medical service rates has been accompanied by an improvement in the quality and availability of medical services. Improved transportation facilities and an increase in the number of hospitals have made medical care more readily available to farm folks.

More farm folks, it was reported, now come to the doctor than in the earlier days of rural health service. Except for this increased efficiency in the use of the doctor's time, it was said, there probably would have been more of an increase in rates for medical services in rural areas during the past twenty-five years.

RATES VARY BY REGIONS

The report also deals in detail with costs of hospital service, fees for physicians, dentists, oculists, and optometrists, and charges for nurses' services. The increase in fees from 1910-1914 to 1935-1936 varied somewhat among the several services. Physicians' fees increased 13 per cent, dentists' fees were up 22 per cent, oculists' and optometrists' fees 14 per cent, hospital charges 17 per cent, and nurses' fees were 23 per cent higher.

During the last decade or more, rates in the New England and Middle Atlantic regions have been maintained at relatively high levels, reflecting, in part, the greater stability of farmers' incomes in these regions. On the other hand, in the West North Central region, where the severe droughts in 1934 and 1936 reduced farm income sharply, rates in 1935-1936 were only 9 per cent above the prewar level.

Index numbers of changes by regions are shown in the following table. In general, medical service rates to farmers and the expenditures for medical services are highest in the Pacific and Mountain states and lowest in the Southern states.

Index Numbers of Fees for Medical Services to Farmers, by Regions, 1910-14, 1924-29, 1932, and 1935-36 (1910-14=100)

Region	1910-14	1924-29	1932	1935-36
New England	100	133	132	133
Middle Atlantic	100	138	133	132
East North Central	100	123	118	119
West North Central	100	117	112	109
South Atlantic	100	121	118	122
East South Central	100	124	121	121
West South Central	100	119	107	111
Mountain	100	116	110	112
Pacific	100	115	113	112
United States	100	121	116	116

In the past, the Bureau of Agricultural Economics has indicated the trend of prices paid by farmers for articles on the basis of prices paid for commodities only. Data on changes in service rates are needed to complete the picture. If provision is made for collecting current data on service rates to farmers, it is stated, these service rates should be combined with commodity prices to form a comprehensive measure of changes in rural living costs.

Since medical service rates have not changed greatly and medical care constitutes less than 10 per cent of the budget, the adding of an index series of these rates to index numbers of prices paid by farmers for commodities would have little effect upon the index. The tendency would be to

smooth the index. It would be slightly lower in the period 1924-1929, slightly higher in 1932, and slightly lower in 1936. As a measure of purchasing power it would be more accurate than the index number of prices of commodities but not very different.

PUBLIC HEALTH IN CALIFORNIA—1937-1938 *

Since the last meeting of this organization public health conditions, in so far as communicable disease control is concerned, have reflected great credit upon local health authorities. Diphtheria and typhoid fever were lower in prevalence last year than at any time in the history of the state. Animal rabies was more prevalent than for many years and there were no less than three human deaths from this disease. The St. Louis type of epidemic encephalitis appeared in California—the first time that it has been encountered west of the continental divide. More than 100 cases, 40 per cent of which were in the younger age groups, were investigated by the California State Department of Public Health. No other major outbreaks of communicable diseases were reported.

Migratory agricultural laborers in the San Joaquin Valley, particularly, caused considerable concern to many governmental agencies and unofficial organizations as well. Typhoid fever and smallpox appeared among these laborers, but through the intervention of local officers, assisted by state employees, all outbreaks of these diseases were brought under control and many thousands of workers were immunized.

Plague was demonstrated in rodents and in fleas taken from a wide variety of rodents during the past year. There seems to be no specific geographical area to which plague infection is confined. It is encountered at high elevations and at sea level, in the northern as well as southern areas of the Pacific slope. There are many seemingly paradoxical findings in rodent plague which will be discussed by Doctor Meyer in his paper to be presented this morning. No human cases of the disease have occurred in California since our meeting of last year.

The development and growth of the program for the control of venereal diseases is an outstanding feature in the progress of public health. Some of the most conspicuous accomplishments are indicated in the following facts:

1. Efficiency in reporting cases of venereal disease has improved greatly. There was an increase of 44 per cent in 1937 and during the first half of 1938 there is an indicated increase of 50 per cent over 1936. In February of 1937, the month that the State Bureau of Venereal Diseases was reorganized, there were 889 cases of gonococcus infection reported and in June of 1938 no less than 1,514 such cases were reported. Syphilis reports increased from 828 in February of 1937 to 2,335 in June of 1938.

2. During the two years ended June 30, 1938, treatments administered in cases of syphilis and gonococcus infection totaled 878,679. Of these, 329,165 were given during the first year of the biennial period and 549,514 during the second year.

3. The number of blood tests for syphilis performed in the State Bacteriological Laboratory increased from 3,416 in July of 1936 to 10,063 in June of 1938.

4. Public health nurses employed by the Bureau of Venerial Diseases during the four months ending with June, 1938, located sixty-nine sources of infection, 411 contacts and 1,082 cases in which treatment had lapsed.

There is food for thought in the statement that if the same morbidity rate for syphilis had prevailed in California last year as prevailed in Sweden in 1934 there would have been only 457 reported cases in the state instead of 17,282 cases reported.

It is admitted, generally, that the educational campaign carried on by official, and also unofficial organizations throughout the United States, has accomplished as much in the improvement of general health conditions as it has in the relief of tuberculosis. Since the tuberculosis campaign originally was based largely upon education in the rules of hygiene, it would seem that the campaign for the control of syphilis, because of its greater complexity, may be productive of more extensive results in providing the general public with exact scientific information relative to the major infectious diseases, their modes of treatment and methods of control. The individual who acquires specific information relative to the infectiousness of syphilis is likely to acquire reliable information relative to the communicability and control of most other infectious diseases. If successful, such a campaign will go far toward the establishment and maintenance of confidence in all public health procedures.

Also, the attitude of the health officer toward the venereal disease campaign may have a very direct bearing upon the success of all other activities that may be conducted by his department. The public relations program must, of necessity, vary according to the status of public opinion in the various local communities. Nevertheless, a definite stand in matters related to the control of venereal diseases must be taken by every health officer. Full support should be given to the program everywhere.

At the present time no less than 81½ per cent of the population of California is under the administration of whole-time public health service. Twenty-four counties (including San Francisco City and County) and ten municipalities have public health departments whose employees devote their whole time to the duties of their respective offices. Since the last meeting of the Health Officers' Section the Fresno City Health Department has been reorganized upon a whole-time basis and the counties of Solano, Sonoma and Tulare have joined the ranks of those employing whole-time county health units.

Any review of public health in California during the past year must, of necessity, give recognition to new demands for service that have led to the alteration or expansion of old programs and the development of new procedures in public health administration. There has come a general growth in those services that are not directly concerned with the control of communicable diseases. To be sure, there has been no gap in the practice of procedures for immunization against smallpox and diphtheria, which must always be regarded as standard in any official public health program. The low incidence of these and other diseases indicates that local health officers throughout most of the state have not neglected their activities in the prevention and control of communicable diseases.

There is a marked tendency, however, to regard the human being as a social unit in the structure of government rather than as a group of cells under control of biological laws. Of course, those factors that have to do with heredity, physical growth, resistance to disease and immunity are still existent. There has come no sudden biological transformation in the human being, but he has become regarded today, more than ever before, as a patient rather than as a case.

Services that have heretofore been denied to a large proportion of citizens are now readily available. More intensive and incessant demands, in fact, may extend our public health program into new fields, such as control of cancer and other chronic diseases through treatment, more effective and more extensive education in healthful living, broad social services and activities that may even be undreamed in the light of our present knowledge.—*Bulletin*, California Department of Public Health.

* W. M. Dickie, M. D., Director California State Department of Public Health.

Read before the Health Officers' Section, League of California Municipalities, Santa Barbara, September 6, 1938.

AN INVESTIGATION OF THE NARCOTIC EVIL *

Mr. Coffee of Washington: Mr. Speaker, this bill proposes an appropriation for making a survey of narcotic-drug conditions in the United States.

A question naturally arises as to why such a survey is desirable. The answer cannot be given without first gaining

* Speech of Hon. John M. Coffee of Washington, in the House of Representatives, Tuesday, June 14, 1938.

A discussion of House Joint Resolution 642, to provide for a survey of narcotic-drug conditions in the United States by the Public Health Service. Introduced by Mr. Coffee of Washington, April 7, 1938. Referred to the Committee on Interstate and Foreign Commerce and ordered to be printed.

an inkling of the narcotics situation. We are especially concerned with the economic aspects of the situation.

ECONOMIC ASPECTS OF NARCOTICS

It is estimated by the American Association on Drug Addictions, of Seattle, that the annual cost to the taxpayers of this country of narcotics addiction, chiefly opiate addiction, is of the order of $2,735,000,000, or about $80 per family. It is claimed that this is a needless burden imposed on the people, not by conditions inherent in the problem of drug addiction, and not by the operation of law, but by the mistaken interpretations of law made by the Federal Narcotics Bureau.

If this claim is justified, the Narcotics Bureau stands as the costliest bureau or governmental department in the world, and the Commissioner of Narcotics ranks as far and away the costliest man in the world. He and his predecessor, a prohibition officer, have been in the control of the narcotics situation for seventeen years.

PURPOSE OF PROPOSED INVESTIGATION

The purpose of the investigation proposed in this bill is to evaluate these claims, with the expectation that if they are found valid action will be taken speedily to reform the evils of the situation.

TWO TYPES OF LAWS TREATING OF NARCOTICS

There are two types of federal laws supposedly governing the narcotics situation: (1) An import law providing that crude opium and coca leaves may be imported under certain conditions, but forbidding the import of any refined products or alkaloids of either drug; and (2) the Harrison Special Tax Act of 1914, commonly called the Harrison Narcotic Act, which imposes a head tax on all legitimate handlers of narcotic drugs, and (as revised in 1918) a special tax also on the narcotic drugs manufactured from the imported crude substances.

The first of these laws I shall not consider at the moment beyond pointing out the obvious extreme difficulties encountered in the endeavor to prevent smuggling of products of such small bulk as the alkaloids, morphin, heroin, and cocain, the dosage of which is measured in grains or fractions of a grain. In another connection it will be noted that the opium alkaloids in particular are admittedly smuggled into the country constantly to the extent of many tons annually. It will be noted also that the smuggling racket was a direct outgrowth of the operation of the other narcotics law, the Harrison Act.

HARMFUL EFFECT OF HARRISON ACT

In examining the Harrison Special Tax Act we are confronted with the anomaly that a law designed (as its name implies) to place a tax on certain drugs, and raise revenue thereby, resulting in reducing enormously the legitimate importation of the drugs in question, while developing a smuggling industry not before in existence. That, however, is only the beginning. Through operation of the law, as interpreted, there was developed also, as counterpart to the smuggling racket, the racket of dope peddling; in a word, the whole gigantic structure of the illicit drug racket, with direct annual turn-over of upward of a billion dollars.

PITY THE POOR ADDICT

Incidental effects were the persecution of perhaps a million victims of the diseased condition known as drug addiction, the great majority of whom had been law-abiding, self-respecting, self-supporting citizens, but who now became human derelicts and were thrust by thousands into jails and prisons simply because they could not legally secure the medicine upon which depended their integrity of mind and body. There were no narcotics prisoners in federal prisons prior to the passage of the Harrison Act. Ten years later, more than one-third of all convicts in federal prisons were narcotic cases.

The total number of such federal narcotic prisoners during the period since the Harrison Act began to operate as potent maker of criminals is of the order of 75,000, with aggregate prison sentence of upward of 100,000 years. No other statute ever operated to make criminals on any comparable scale.

MISINTERPRETATION AT FAULT—NO INHERENT DEFECTS IN BILL

Let me repeat, however, that no such dire effects were inherent in the Harrison Act itself. The social and economic disaster involving an army of sick people came about through bureaucratic action which is claimed to have been based on misinterpretation of the law—misinterpretation which is alleged to have set at defiance the clear decisions of the Supreme Court—illustrating incidentally the often overlooked fact that the high tribunal is purely advisory in function, having no power whatever to enforce its decisions.

COURTS HOLD HARRISON ACT TO BE A REVENUE BILL

Let us get down to cases. The essence of the Harrison Act is the provision that no slightest modicum of any narcotic drug shall get to the ultimate consumer in any manner whatsoever except at the hands of a registered physician—we may overlook dentists and veterinary surgeons for the present purpose. There is no reference to the uses of narcotics in the law, and no reference to drug addicts or drug addiction. The Supreme Court has ruled—Linder case, 1925; Nigro case, 1928, and so forth—that the law is a pure revenue measure, and that federal law has no control over the practice of a profession—reiterated, with specific citation of Linder case, in the A. A. A. decision of 1936.

INHUMANITY TO ADDICTS

The Narcotics Bureau ignores these decisions and assumes authority to prevent physicians from even the attempt to cure narcotic addicts unless the patients are under forced confinement. The addicts number, by the very lowest estimate, at least 100,000. The institutions that will receive them as patients are almost nonexistent. It follows that the prohibitory mandate of the Narcotics Bureau effectively denies treatment to the vast majority of narcotic addicts.

A GREAT INJUSTICE OF MODERN TIMES

It is believed that this is the first instance in all history of the denial of medical treatment to a class of citizens of whatever status or capacity. The fact that the Supreme Court has declared that narcotic addicts are diseased and proper subjects for medical treatment makes the action of the Narcotics Bureau peculiarly paradoxical. The paradox is emphasized by the further fact that the Federal Government has erected a beautifully equipped hospital for treatment of narcotic addicts at Lexington, Ky. Most of the patients are first condemned to prison, then transferred to the hospital. Voluntary cases may also be received. But the total capacity of the institution is only about 1,000. At least a hundred such institutions would be required to meet the needs of the existing addict population—five or ten times that if the newer estimates of that population are valid.

ADDICTION, ONCE DEVELOPED, IS CHRONIC

The erection of a hundred or a thousand such institutions, however, would by no means solve the narcotics problem. Addiction, once developed, is a very chronic condition. It is admitted by the authorities, including the narcotics commissioner, that very few "cures" result from incarceration for a one-year period. It has been suggested that a five-year segregation is the least that can be expected to restore the average addict. The idea of incarcerating even a hundred thousand, let alone a million, unfortunates for a term of five years is rather startling—especially considering that they are sick people, for the most part of average respectability and moral status, not markedly handicapped by their infirmity.

UNIVERSAL IMPRISONMENT OF ADDICTS IMPOSSIBLE, HEARTLESS, AND UNSOUND

In any event, such effort would be mere temporizing. Even if the miracle of curing all existing addicts were effected in five years, we should be no better off, because the dope peddler, deprived of his present market, would instantly set to work to develop a new market, and a perennial new crop of addicts would be in evidence.

THE REMEDY IS SIMPLE

But what is the alternative? Fortunately, the answer is simple. If the Harrison Act were allowed to operate as was designed, all victims of drug addiction disease—"narcotoxia" it is technically termed—would come under medi-

cal supervision; and, on prescription, would be supplied with whatever medicine they need at slight cost at the drug stores. Morphine which the peddler sells for a dollar a grain would be supplied, of pure quality, for 2 or 3 cents a grain. The peddler, unable to meet such a price, would go out of business—the illicit narcotic drug industry, the billion dollar racket, would automatically cease to exist.

That much may be stated with absolute certainty. Almost as certain is it that the army of narcotics derelicts would be reduced to the vanishing point. Courts would cease to be crowded with delinquents who owe their downfall to the necessity of meeting the dope peddlers' exorbitant demands. Jails would be emptied; federal prisons would lose a quarter or a third of their population. The billion dollar—or two and three-quarter billion dollar—tax on the public would be eliminated.

Why should there be any argument against permitting the law to operate, since such beneficent results seem inevitable? Here we come to the crux of the matter. The opposition comes from a small coterie of persons in authority, who are in position to benefit by the status quo. These persons will be brought into the open by such a congressional investigation as this bill proposes. There will then be opportunity to subject to official scrutiny the records of these opponents of law reform.

LET US FIND OUT THE CAUSE OF THIS SITUATION

Specifically, there will be opportunity to question the Commissioner of Narcotics—and to observe how he may endeavor to justify the activities that cost the American people not far from $3,000,000,000 a year, and give the Commissioner himself status as the costliest man in the world.

It seemed necessary to make these general comments, if for no other reason, to explain why this bill (H. J. Res. 642) proposes to entrust the investigation and survey of the narcotics situation to the Surgeon-General of the United States Public Health Service, and not to the Bureau of Narcotics.

THE HARRISON LAW AS INTERPRETED

The Harrison Special Tax Act of 1914 required all handlers of narcotic drugs, opium and coca leaves and their products and preparations to register with the Commissioner of Internal Revenue, and pay an annual tax of $1. Narcotic drugs could be transferred only on presentation of a signed order form issued by the Commissioner of Internal Revenue; but, physicians, dentists, and veterinary surgeons were exempt from this requirement, and druggists could issue narcotics on the prescriptions of these exempt professional persons; provided only that the prescriptions were issued for legitimate patients, "in the course of professional practice only." The writers of prescriptions were to keep duplicates or copies in their offices; and the original prescriptions, after being filled, were to be kept for two years on file at the pharmacy. No record need be kept by the practitioners of narcotic drugs directly administered to patients whom they professionally attended.

That is all. There is no mention of the uses of narcotic drugs; no reference to addiction or any other malady or condition, and no suggestion as to meaning or interpretation of the words "legitimate," "patient," or "professional practice." Nor is there the slightest hint as to the qualifications that render any person eligible to register as a physician, dentist, veterinary surgeon, or pharmacist. Presumably the lawmakers fully understood that professional eligibility to handle drugs is a matter for state supervision and control, and one over which federal law has no jurisdiction. It is not even specifically stated that a physician may use his own prescription blanks; it is merely stated that he is not required to use the printed order forms issued by the Commissioner of Internal Revenue, which all other handlers of the drugs must use.

LATER CHANGES IN LAW AS INTERPRETED

Subsequent amendments (1919 and 1926) modified the annual head tax (establishing a graded scale ranging from $24 to $3, and then shifting the minimum—for physicians—back to $1), and provided for a stamp tax of 1 cent an ounce; no drugs to be dispensed to the ultimate consumer except "in or from" a package bearing the revenue stamp. But the amendments did not otherwise concern the pharmacist or the physician, which is equivalent to saying that the Harrison Act, in its relation to the professional activities of the persons who alone are authorized to dispense narcotic drugs to the consumer, remains absolutely unmodified since its enactment in 1914. Any changes in operation of the law have not been due to legislative action, but to judicial or bureaucratic interpretation. These changes have been so notable, however, that the net result has been, as to every essential, diametrically opposed to what the proponents of the act planned and hoped for.

FACTS OF NARCOTICS PROBLEM ARE DISQUIETING

For example, (1) direct revenues have decreased instead of increasing, and an indirect burden of cost has been multiplied a hundredfold; (2) smuggling of narcotic drugs has increased from negligible pounds of smoking opium to scores of tons of morphine and heroin; (3) a negligible group of peddlers of cocaine in prohibition districts has become an army of peddlers of morphine and heroin; (4) a scattered company of drug addicts, a majority of whom were respectable, self-supporting citizens, neither financially nor morally hampered by their infirmity, has become a multitude of derelicts, victims of the dope peddler and the narcotic agent, and denied all medical attention; (5) whereas formerly a considerable number of addicts were cured by sedulous medical treatment, such treatment could no longer be attempted, and every case of addiction became practically hopeless from inception (including large numbers of soldiers returned from the Great War); (6) the dope peddler, whose very existence was due to the law as interpreted, was and is naturally diligent to increase his market so that the addict population has probably doubled, if not tripled, since the Harrison Law was enacted; (7) under stress of necessity, being denied legitimate access to the medicine they require, narcotic addicts as a class become lawbreakers (since every purchase constitutes a felony), and soon the jails and prisons were crowded with narcotic prisoners (in federal prisons alone narcotic cases advanced from none in 1915 to 2,569 in 1925); physicians were so hampered in their use of the most indispensable of medicines that most of them refuse to treat drug addicts even for maladies other than addiction disease, yet, even so, upward of 25,000 physicians have been reported for criminal violation of the Harrison Act, and about 5,000 have been convicted in federal courts, and either heavily fined or imprisoned, the irony of the situation being enhanced by the fact that, with rare exceptions, these convicted physicians had assiduously attempted to conform to the law and to every regulation of the narcotics authorities.

Such have been some of the unpredicted consequences of operation of the Harrison Act, as interpreted. . . .

An Experimental Study of the Behavior of Sulfanilamid.—Fred L. Adair, H. Close Hesseltine, and Lucile R. Hac, Chicago (*Journal of the American Medical Association,* August 27, 1938), determined the elimination of sulfanilamid in certain body fluids (cervical secretion, menstrual fluid and human milk) and its transmission to and its effect on the unborn fetus. Sulfanilamid has been found in the cervical secretion and menstrual fluid, but in amounts so small that its bactericidal action on the gonococcus is questionable. The criterion of cure of gonorrhea should be based, if possible, on cultural studies as well as on smears. Sulfanilamid is excreted in breast milk, both free and as the acetyl derivative. The milk level is considerably above the blood level, and the drug is excreted in the milk for some time after the blood level is negligibly low. With doses of 2 and 4 grams (30 and 60 grains) the total amount excreted was never greater than 1.5 per cent of the amount of the drug administered. It was still being excreted in small amounts seventy-two hours after medication had been discontinued. Sulfanilamid is transmitted to the placenta and fetus of the rabbit and is associated with a marked increase in the mortality of the young. It has also been found in the placenta and cord blood of the human being. Until more is known of the tolerance of the human fetus and of the newborn for sulfanilamid, the drug should be administered only with the utmost caution during pregnancy and the period of lactation. If administered to the mother, breast feeding should be discontinued during the period that sulfanilamid is excreted in the milk.

TWENTY-FIVE YEARS AGO†

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. XI, No. 10, October, 1913

From Some Editorial Notes:

A Considerable Mess.—At the time of writing, no Board of Medical Examiners has been appointed under the "new" and wonderful law. This brilliant piece of legislation calls for the new board to meet and organize on the first Tuesday of September, which was the second day of that month, but as no board has been appointed there has been no organization, no methods of procedure formulated, and nobody knows anything definite as to the status of medical licensure in California. Of the old board, nine members have not resigned, and it may be presumed that they are still members of "a" Board of Medical Examiners; but under which law? What is the medical law of this state? Is it the old law or the new law? Why has the Governor failed to appoint a new board to administer his new law? . . .

* * *

Labor and "Patent Medicines."—With the statement that it is "From the *United Labor Journal,* March 1, 1913," comes a reprint of a short article, "Patent Medicines Proven Good." *"United Labor"* certainly is a traitor to the best interests of the laboring man, for it is just that class—the poor and the very moderately well-to-do laboring class—that make rich the patent medicine manufacturers. What sort of an influence can such a paragraph as the following have upon the not-too-well-able to think laboring man who might better spend his few dollars for more air or food than for an expensive mixture of alcohol and coloring matter and some worthless vegetable stuff of evil taste:

"If the records could be compiled, that is to say, were figures available for such records, it would be shown that patent medicines are the greatest safeguards to the health of the nation, and that they do more to stave off sickness and prevent epidemic than any other element brought out of the chaos of experiments by science." . . .

* * *

Is the Clinical Congress an Unmixed Blessing?—Next month there will be held in Chicago another of the huge clinical congresses of surgery, and undoubtedly the attendance will be large, not an inconsiderable percentage of those attending coming from the smaller cities and towns. Are these "clinical congresses" altogether an unmixed blessing and wholly desirable? Is there not a considerable element of danger? Many very able and skillful surgeons will perform remarkably delicate operations in a manner and with an ease that are totally deceptive; it looks very easy to do some particular thing when one watches an expert with apparently no effort and with a rapidity that still further adds to the illusion, perform an operation. Will not many a man who lacks ability to handle his fingers, to say nothing of the mechanical brain behind them, go home and try to do that same piece of work that looked so easy when he saw it done by the expert at the "congress"? There is a tremendous gap between the ability of the expert and that of the average man, and we must remember that in our work it is not merely some material and time wasted in a failure—it is life or health, and these cannot be lightly considered.

* * *

Plague in Squirrels; and Rabies.—The *Wisconsin Medical* Journal refers to "the quiet, persistent fight which is being made to protect us all from plague" by fighting the infected ground squirrels here in California. Indeed, so quietly does the work go on and so long is it since anything has been heard of it, that even we here in the state have almost come to forget that it is going on. And truly

(Continued in Front Advertising Section, Page 15)

† This column strives to mirror the work and aims of colleagues who bore the brunt of Association work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and new members.

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA†

By CHARLES B. PINKHAM, M.D.
Secretary-Treasurer

News

"County Boards of Supervisors have no legal right to contract with private physicians to care for the indigent sick at fixed fees, Attorney-General U. S. Webb ruled yesterday. Webb agreed with District Attorney Earl Redwine of Riverside County that, under the State Political Code, such care for the sick must be administered in hospitals and institutions." (San Francisco *Chronicle,* September 11, 1938.)

"The State Supreme Court yesterday upheld the health service plan of San Francisco Municipal employees, and, in a companion decision, had warm words to say for group medicine. . . . In passing, the court referred to the San Francisco plan as a good example of how group medical care can successfully be obtained. Of the argument that the system is unconstitutional because it compels deduction from employees' pay, the court said: 'No one has a vested interest in public employment except under terms fixed by law. One of the terms of employment in this case is a provision for the health service plan.' Justice Douglas L. Edmonds, dissenting, called the plan 'simply social health insurance for a restricted number of individuals who are compelled to participate.' The health insurance plan was authorized by the voters last year. Under its terms, $2.50 a month is deducted from the pay of eleven thousand city employees, additional sums for dependents. High-salaried officials and employees with religious objections are exempted. All others must participate. The monthly payment entitles participants to medical care from any physician on the health board's panel under the general supervision of Dr. Walter B. Coffey, Medical Director for the Board. Any physician may join the panel upon agreement to accept fixed fees for various medical services established by the Board. . . . In a companion decision the court, by a four to three vote, upheld a lower court decision, barring the Pacific Health Corporation, a western health insurance concern, from selling health contracts, on the ground that such action constituted illegal practice of medicine. The court majority went on to say: 'It is possible to bring medical care to vast numbers of people who now can ill afford it by some means which will protect both the medical profession and the public from the evils of corporate control. The future of group medicine would seem to lie either in well-considered plans adopted by proper legislative authorities or in a carefully regulated statute setting forth the means by which private organizations may offer such services.' Justice Edmonds, likewise, dissented from this decision, a dissent in which Chief Justice William H. Waste and Justice Frederick W. Houser concurred. Said Justice Edmonds: 'I find nothing in the Medical Practice Act which prohibits a corporation from hiring reputable licensed physicians to care for employees or members.'" (San Francisco *Examiner,* September 3, 1938.)

"The State Board of Education is to be defendant in a test case to determine whether osteopaths may act as school doctors. . . . Plaintiff is Edward William Jordt, Mendocino County osteopath, who seeks a writ of mandate to require the Board of Education to grant him a certificate to serve as a school doctor. Jordt claims he is entitled to hold a health and development credential from the State Board. The denial of the issuance of the credential was made on May 27 by the Board on the basis Jordt did not hold a certificate to practice as a physician and surgeon from the State Board of Medical Examiners." (San Bernardino *Sun,* August 6, 1938.)

(Continued in Front Advertising Section, Page 19)

† The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6.